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Financing Educational Excellence

by Allan Odden

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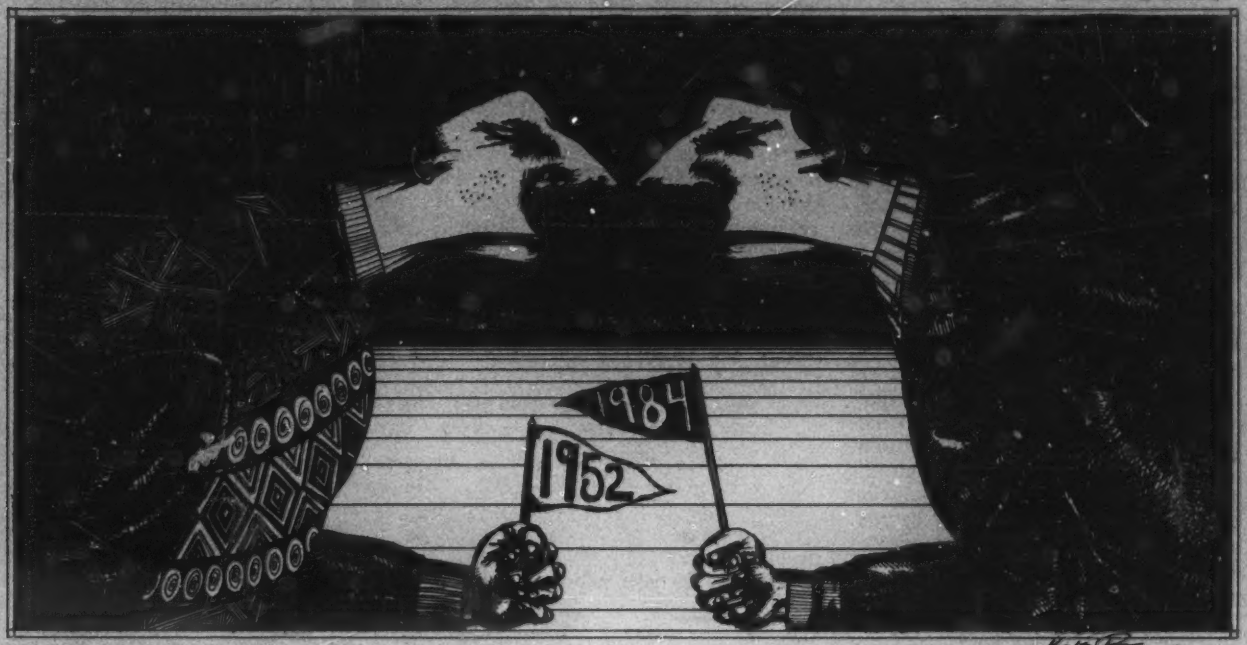
ANTI-DEMOCRATIC ATTITUDES OF HIGH SCHOOL SENIORS IN THE ORWELL YEAR

Illustration by Kevin Pope



by Stanley M. Elam

How have high school students' attitudes toward democracy and government changed in the past 30 years? Mr. Elam compares his study of the Class of '84 with a similar study of the Class of '52.

A 1952 ISSUE of *Look* magazine placed this provocative question before its 3.3 million readers: "Are U.S. Teenagers Rejecting Freedom?" Unsurprisingly (else why pose the question?), the answer was: yes, quite a few of them are. Said the editors of *Look*, "If American high school boys and girls could go to the polls tomorrow, a shocking number of them might very well vote to throw away some of the most important freedoms guaranteed to all citizens of the United States.

"Even more amazing, these teenagers seem capable of falling for the hysterical pitch of a home-grown Hitler or Stalin. They favor such fascist concepts as the strong dominating the weak, strong-arm police powers, and sterilization of certain groups of people."[1]

Standard viewing-with-alarm by the sensation-mongering press? Not quite. *Look* was only reporting the findings of a group of respected social scientists headed by H. H. Remmers, whose works were regular fare for students of educational sociology back in the Fifties. The Purdue Youth Opinion Poll directed by Remmers operated from the mid-Forties until well into the Sixties, polling thousands of high school and college students across the U.S. on a variety of topics.

Those who spent considerable sums of money to keep the poll going saw this enterprise as a scientific means of evaluating the effect of teachers and parents — in fact, of all responsible adults — on "the thinking of tomorrow's leaders." And Remmers and his colleagues registered their misgivings about the success of these responsible adults in a series of publications.

For example, *The American Teenager* (Bobbs-Merrill, 1957) announced that the typical high school student of that day en-

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dorsed censorship of books, newspapers, magazines, and other media, as "protective of the public against improper ideas." Many students also thought, the polls revealed, that "behavior can and should be scrutinized by police, using wiretapping as a legitimate source of evidence." George Orwell's vision of mass television surveillance by Big Brother in 1984 began to look realistic.

In 1963 Remmers and a dozen coauthors published a final volume, forthrightly titled *Anti-Democratic Attitudes in American Schools* (Northwestern University Press). It summarized nearly two decades of measuring youth opinion and found few grounds for optimism about young people's understanding of and appreciation for the American heritage of political and personal freedom. For example, abridgment of freedom of the press was less abhorrent to high school youngsters in 1960 than in 1951. In 1960 an actual majority (51%) of the youngsters polled disagreed with the statement that "newspapers and magazines should be allowed to print anything they want except military secrets." That finding represents an increase of 10% over 1951. Whatever one may think of the question (I wonder how today's Supreme Court justices would respond to so strict a construction of press freedom guarantees in the First Amendment), this change in the attitudes of youthful Americans over a 10-year period raises some interesting issues.

These issues are so interesting, in fact, that I decided to attempt a modest replication of the research reported in *Does Youth Believe in the Bill of Rights? Report of Poll No. 30 of the Purdue Opinion Panel*, published in November 1951.[2] Time and resources limited the effort rather severely.* (An enterprising researcher or research organization could make an enormous contribution to our understanding of attitudinal changes in young people by conducting a full-scale replication.) Nevertheless, as the year 1984 begins, it seems worthwhile to report some findings of my poll, taken in early October 1983 among high school seniors (Class of 1984) in 53 school districts, located in 26 different states and representing all regions of the U.S. In all, I received 425 usable responses to an instrument that sought opinions on 62 statements related to the Bill of Rights and to three forms of government. Another 13 questions gathered demographic information, and a final nine items tested knowledge of history and government that high school students might reasonably be expected to have.

The findings of this research are compared with the findings of the 1951 Purdue Opinion Poll (of members of the Class of 1952) in the tables that follow. The temptation to explain and interpret these bare numbers is almost irresistible. However, I will call attention only to some of the more striking differences and offer a few generalizations amply supported by the data.

THE 15 STATEMENTS in Table 1 paraphrase basic civil liberties and freedoms guaranteed by the first 10 amendments to the U.S. Constitution. Certain freedoms important in Revolutionary times are omitted because they are no longer of particular significance. The Purdue Opinion Panel concluded, on the basis of the 1951 returns, that one of two things was true: either young people did not believe wholeheartedly in the Bill of Rights, or they had not thought through the implications and ramifications of the 15 state-

Table 1. Responses of the Class of 1952 and the Class of 1984 to Statements Keyed to the Bill of Rights

15. Newspapers and magazines should be allowed to print anything they want except military secrets.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	46	43	11	0
1984	37	44	16	2

18. Religious belief and worship should not be restricted by laws.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	82	13	5	0
1984	72	16	11	1

23. The government should prohibit some people from making public speeches.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	32	57	11	0
1984	20	69	8	2

26. In some cases, the police should be allowed to search a person or his home even though they do not have a warrant.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	20	76	4	0
1984	33	60	6	1

28. Some criminals are so bad that they shouldn't be allowed to have a lawyer.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	12	84	4	0
1984	21	70	6	3

31. Some religious groups should not be allowed the same freedom as others.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	7	90	3	0
1984	16.5	72	11	.5

*Using a list of more than 16,000 U.S. public school districts, I drew a stratified random sample of 145, each of which includes one or more high schools. Superintendents of schools in this sample were invited to cooperate in the research reported here; 68 of them accepted. By our October 7 deadline, 425 usable responses to an 84-item research instrument had been received from high school seniors in 53 of these districts. This number compares with the 634 seniors who responded to the 1951 Purdue Youth Opinion Poll No. 30, on which the 1983 questionnaire was based. We gave careful instructions for randomization in the selection of respondents. We cannot be certain, of course, that these instructions were followed. Because of time and resource constraints, we were unable to correct a minor geographic imbalance (the South was somewhat overrepresented and the Mountain/Pacific region somewhat underrepresented), and we did not employ the wide range of statistical tests applied by the Purdue Opinion Panel in 1951. However, we are confident that the 1983 response is roughly comparable to that obtained in 1951. Our data will be made available to scholars who wish to probe the responses further than we have done for purposes of this report. — *Larry Barber*

Table 1 (continued)

22. If a person is accused of a crime, he should always have the right to know who is accusing him.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	84	10	6	0
1984	72	19	8	1

35. Certain groups should not be allowed to hold public meetings, even though they gather peaceably and only make speeches.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	24	64	12	0
1984	15	75	10	0

38. Foreigners in this country should always be allowed the same basic freedoms that citizens have.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	49	38	13	0
1984	53	28	18	1

40. Local police may sometimes be right in holding persons in jail without telling them of any formal charge against them.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	18	72	8	0
1984	9	82	8	1

42. In some criminal cases, a trial by jury is an unnecessary expense and shouldn't be given.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	10	79	11	0
1984	27	62	10	1

45. In some cases, the government should have the right to take over a person's land without bothering to go to court.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	8	90	2	0
1984	6	88	5	2

47. The police or FBI may sometimes be right in giving a man the "third degree" to make him talk.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	60	26	14	0
1984	54	28	17	1

50. Persons who refuse to testify against themselves (that is, to give evidence that would show that they are guilty of criminal acts) should either be made to talk or be severely punished.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	29	55	16	0
1984	19	80	10	1

53. Some of the petitions which have been circulated should not be allowed by the government.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	32	43	25	0
1984	20	50	29	1

Most of these uncertain youths will have the privilege of voting in a Presidential election during the same year in which they graduate from high school.

ments before responding to them. In either case, the panel considered the situation "tragic," since it meant that youths would "readily respond to . . . verbal persuasion" and could be "easily swayed or led by the demagogue." This interpretation applied equally well, the report continued, to questions in the 1951 poll having to do with communism and fascism (Tables 2 and 3).

To the credit of the Class of 1984, on several of the 15 statements in Table 1 the members who were polled agreed more closely with the Founding Fathers than had the Class of 1952. I find it reassuring that a higher proportion of today's young people believes in such basics as freedom of public speech and assembly, despite the fact that more than 90% of today's 17- and 18-year-olds graduate from high school, whereas less than 50% did so in 1950. (The Purdue researchers discovered that dropout-prone youths were less "democratic" and more "authoritarian.") Certainly the majority of youths now concur with Thomas Jefferson that "error or opinion may be tolerated where reason is left free to combat it."

But it is more than a little disconcerting to find a larger percentage of the Class of 1984 than of the Class of 1952 willing to allow a police search without a warrant, to deny legal counsel to criminals, and to accept restrictions on religious freedom. It is also discouraging to see so many youngsters uncertain of so many traditional freedoms. More responses fall into the uncertain category today than in the autumn of 1951. Why? Modern youngsters are three years closer to voting age than the Class of 1952 was. Most of these uncertain youths will have the privilege of voting in a Presidential election during the same year in which they graduate from high school. They ought to be more vitally aware of their heritage of freedom than they are.

Eight of the poll items were statements paraphrased from the *Communist Manifesto*, written by Karl Marx and Friedrich Engels. Table 2 makes it obvious that a sizable number of youths accept at least

some Marxist ideology today, just as they did in 1951. In fact, differences in responses from the two generations are quite small; sampling error could account for most of them.

Marxist ideology was so sensitive a topic in the fall of 1951 (the first of the virulent McCarthy years) that a number of educators refused to administer the Purdue questionnaire. I have no way of knowing how many of the school superintendents invited to cooperate in my replication last fall declined to do so because of the sensitive nature of these questions, but only one-third *did* agree to cooperate.

Some caveats are in order as readers consider Table 2. First, note that most of the statements refer to idealistic, theoretical communism — not to the reality we know today in those nations we call "communist." Certainly the outcomes would have been different had the questionnaires focused, for example, on the restrictions of personal freedoms that characterize life in the Soviet Union. It is also important to note, as the Purdue Opinion Panel did, that some of the communistic statements are not incompatible with the tenets of democracy; in fact, some of the principles propounded by Marx, such as equality of opportunity, are *basic* principles of democracy as well. The important point, said the Purdue social scientists, is that, when an individual's beliefs coincide with a few of the statements of communism, this fact does not make that individual a Communist.

Closely related to communism in the contemporary world is the question of fascism. Modern communist states tend to depend on a fascistic hierarchy of power — a strongly totalitarian government. Thus the topic of fascism is just as central today as it was in the fall of 1951. And, as the Purdue social scientists observed in 1951, one of the prime threats to democracy was then — and still remains — the prevalence of fascistic tendencies. The eight questions shown in Table 3 were designed to measure such tendencies. In 1951 from 22% to 75% of the Class of 1952 revealed fascistic ideology. In the Class of 1984 the range is from 10% to 71%, but it is heartening to note that on six of the eight indicators the new generation is less "fascistic." Far fewer youngsters today believe that the masses don't know what is good for them, for example. Almost no one now believes that what best serves the interest of government is generally right. (Could this be a positive legacy of Watergate? It was no accident that both Jimmy Carter and Ronald Reagan won by campaigning against big government in Washington.) Finally, no one should be surprised that agreement on "more discipline for children" is just as popular today as in 1951. Children *always* need more discipline, don't they?

Table 2. Responses of the Class of 1952 and the Class of 1984 To Questions Revealing Latent Acceptance of Marxist Ideology

18. The government should have control of the railroads and airlines.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	19	70	11	0
1984	13	63	23	1

22. The government should abolish all rights of inheritance to insure equality of opportunity.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	8	78	16	0
1984	10	73	14	3

28. Most basic industries, such as mining and manufacturing, should be owned by the government.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	14	75	11	0
1984	10	74	12	4

30. Our modern society is moved chiefly by the desire for profit.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	69	13	18	0
1984	79	8	11	1

35. Most history is the story of the fight for power between different classes: master and slave, landowner and peasant, management and labor.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	61	27	12	0
1984	63	21	14	1

43. The price of goods we buy should depend only on the cost of making them.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	36	54	10	0
1984	45	43	11	2

48. All banks and all credit should be run by the government.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	24	67	9	0
1984	17	60	17	6

52. Large estates, on which the land lies idle and unused, should be divided up among the poor for farming.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	40	36	15	0
1984	41	36	22	1

THE PURDUE Opinion Panel included a 10-item test in Poll No. 30. It revealed a positive correlation between high knowledge scores and what the panel considered to be "correct" responses to the opinion questions. I attempted to construct a knowledge test for my 1983 survey that would be comparable to the one used in 1951. Table 4 presents the findings from the two surveys. The 1951 conclusion still applies today: the better their scores on

the knowledge test, the more likely are students to hold pro-democratic and anti-fascist or anti-communist beliefs.

However, a bizarre anomaly surfaced in the Poll No. 30 report. An analysis of the responses of the Class of 1952 revealed that the study of civics or of U.S. government had little or no constructive effect on attitudes toward the freedoms guaranteed by the Bill of Rights. In fact, when differences did occur, those seniors who had studied civics were *less* in agreement with the Bill of Rights than their counterparts who had not. One fairly consistent difference between these two groups was that those who had taken civics were less uncertain about their opinions; their attitudes were apparently more "crystallized."

Although the Class of 1984 seems to understand and appreciate constitutionally guaranteed freedoms better than did the Class of 1952, it still has a long way to go.

The Purdue panel offered some tentative explanations for these findings, which they termed "curious." It may well be, they said, that courses in civics or government concentrate more on the *mechanics* of government than on the *values* of democracy. "If this is the case," they added, "it seems that a need exists for greater emphasis upon the basic values of freedom upon which democracy rests." The panel also proposed another possible explanation: the attitudes of students are fairly well developed by the time they reach grade 12, and a short course in civics cannot change these attitudes significantly. Whatever the correct explanation, the panel noted that these findings raise "questions that imply some soul searching for the schools."

Yes indeed; and the soul searching must continue. For, although today's students seem to understand and appreciate constitutionally guaranteed freedoms somewhat better than did the Class of 1952, they still have a long way to go. Perhaps a course in George Orwell would be preferable to a course in civics.

Richard Rovere says, in the introduction to *The Orwell Reader* (Harcourt Brace, 1956), that Orwell was central to his time — which is our time, from the late Twenties to the Fifties and on into the plausible terrors of *Nineteen Eighty-Four*. A socialist and critic of socialism all his life, Orwell was the conscience of his age, and the world has a sense of Orwell as prophet. *Nineteen Eighty-Four* appeared in 1949, a year before he died. In it he uncovered the living roots of totalitarianism in contemporary thought and speech, in the slackening of our ties with the usable past, in our cravenness before the gods of security, in the deaden-

Table 3. Responses of the Class of 1952 and the Class of 1984 to Questions Related to Fascist Ideology

17. Obedience and respect for authority are the most important virtues that children should learn.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	73	18	9	0
1984	62	23	14	1

21. Whatever serves the interests of government best is generally right.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	20	56	24	0
1984	10	73	17	1

27. Most children these days need more discipline.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	69	18	13	0
1984	71	15	14	1

32. Most criminals and moral misfits should be prevented from having children.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	44	35	21	0
1984	12	69	16	3

37. What this country needs most is a few strong, courageous, tireless leaders in whom people can put their faith.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	59	29	12	0
1984	64	22	13	1

38. A large mass of the people are not capable of determining what is and what is not good for them.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	51	33	16	0
1984	33	46	20	1

41. There will always be strong groups and weak groups and it is best that the strong continue to dominate the weak.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	19	66	15	0
1984	14	64	21	1

46. The right of some working groups to call a strike should be abolished as it is a threat to democracy and not in the general interest of society.

Class	Agree %	Disagree %	Uncertain %	No Response %
1952	37	47	16	0
1984	25	53	21	1

ing impulses of our mass entertainment. As Rovere said, "If we and our offspring never have to endure 1984, we and they will have Orwell partly to thank."

Are George Orwell's *Animal Farm* and *Nineteen Eighty-Four* part of your school's curriculum? In these books Orwell eloquently reminds the 20th-century democracies of a Jeffersonian truism: the price of liberty is eternal vigilance.

1. *Look*, 26 January 1952, pp. 29-31.
2. The 32-page report is still available from the Center for Instructional Services, Purdue University, West Lafayette, IN 47907, for $3 per copy. (Add $2 if payment is not enclosed.) □

Table 4. Responses of Students in 1951 and in 1983 on Comparable Tests of Knowledge*

The 1951 Test	Response % †	The 1983 Test	Response % †
1. Bernard Baruch is:		1. Henry Kissinger is:	
a. a member of the U.S. Cabinet	21	a. a member of the U.S. Cabinet	25
b. a member of Congress	19	b. a member of Congress	15
c. a Supreme Court judge	19	c. a Supreme Court judge	1
**d. none of these	41	**d. none of these	57
2. The present Secretary of Defense is:		2. The present Secretary of Defense is:	
a. George Marshall	40	a. General Haig	18
b. General Eisenhower	7	**b. Caspar Weinberger	71
**c. Robert Lovett	25	c. Terrel Bell	3
d. Dean Acheson	28	d. John Glenn	2
3. The U.S. has signed a peace treaty with Germany.		3. In the war between Great Britain and Argentina over the Falkland Islands, the U.S. government remained strictly neutral.	
a. True	57	a. True	52
**b. False	43	**b. False	46
4. The Constitution of the U.S. provided for the President's Cabinet.		4. The Constitution of the U.S. provides for the President's Cabinet.	
a. True	64	a. True	48
**b. False	36	**b. False	49
5. Women gained the right to vote in about the year:		5. Women gained the right to vote in about the year:	
a. 1791	8	a. 1791	1
b. 1860	26	b. 1860	1
c. 1902	30	c. 1902	1
**d. 1920	36	**d. 1920	91
6. All 13 of the original states had ratified the Constitution by the year 1787.		6. All 13 of the original states had ratified the Constitution by the year 1787.	
a. True	55	a. True	51
**b. False	45	**b. False	46
7. Congress has recently passed a universal military training law.		7. The U.S. Congress has passed a law requiring young men to register for the military draft at age 18.	
a. True	62	**a. True	91
**b. False	38	b. False	8
8. Communism was relatively unheard of before the year 1930 or so.		8. Communism was relatively unheard of before the year 1930 or so.	
a. True	49	a. True	32
**b. False	51	**b. False	64
9. The Constitution of the U.S. drew many ideas about the rights of men from early English writers.		9. The Constitution of the U.S. drew many ideas about the rights of men from early English writers.	
**a. True	66	**a. True	75
b. False	34	b. False	20

*Includes responses of all 3,000 respondents (grades 8 through 12) for 1951 (testwise earlier responses alone were not available). Responses for 1983 are from seniors only.
**Mark. The correct response.
†The percentages do not add to 100, because some students failed to respond.

The Growing Imbalance Between Education And Work

by Russell W. Rumberger

Although some studies of education recommend a significant upgrading of the education of the American workforce, Mr. Rumberger suggests that we already have an abundance of highly skilled workers. Our challenge is to use effectively the human resources that we have.

EDUCATION PLAYS an important economic role in U.S. society. Advanced schooling gives individuals access to the most desirable and best-paid jobs; meanwhile, the nation benefits from the contribution that this highly educated workforce makes to the growth of the U.S. economy. Most people believe that the economic benefits of education have no bounds. The many recent reports on the U.S. system of education, including that of the National Commission on Excellence in Education, all urge increased investment in education as a way of improving society and achieving renewed economic prosperity. In fact, these reports suggest that a serious gap exists between the future needs of our high-tech economy and the education that U.S. schools and colleges are now providing for the American workforce of the future.

Yet considerable evidence suggests that the American workforce has already attained an educational level that exceeds the educational requirements of many jobs in the economy. This does not imply that U.S. workers have become too highly educated in general; rather, it means that the demands for highly educated labor in the U.S. economy have not kept pace with the rising educational level of American workers. This growing imbalance between education and work not only affects workers who are forced to accept jobs for which they are overqualified, but it may also be injurious to the performance of the economy.[1]

Three terms have commonly been used to describe this phenomenon: overeducation, underutilization, and underemployment.[2] Each term suggests a discrepancy between the economic position of workers and their level of schooling. The type of discrepancy varies, however. Several observers have traced chronological changes in the economic position of educated workers. For example, some economists have observed a decline in the relative earnings of college graduates between the 1960s and the 1970s.[3] Others have noted an increase over time in the educational levels of workers in specific occupations.[4] Although these trends suggest that the economic position of educated workers, particularly college graduates, has deteriorated over time, they do not reveal the severity of the mismatch that currently exists between workers' educational levels and the requirements of their jobs.

This mismatch can be seen most clearly by comparing the educational levels of workers with the skills required by their jobs. Education develops a variety of cognitive and affective skills that are valuable in the workplace, and each job requires certain types and levels of these skills. Discrepancies between the skills that workers bring to their jobs and the

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skills that these jobs require provide a direct measure of this mismatch.

Of course, such discrepancies will always exist in certain sectors of the labor market. During the 1960s and 1970s there were reported shortages and then surpluses of teachers and aeronautical engineers, for example. These short-term imbalances have always occurred and probably always will. They generally involve specific kinds of skills and relatively few people. Since such imbalances are normally corrected by market adjustments, they cause little concern.

A more widespread and serious problem exists today, however, as increasing numbers of U.S. workers gain higher levels of education than their jobs require. Perhaps as many as 25% to 50% of recent college graduates are overqualified for their current jobs. Moreover, this situation has become increasingly common over the last two decades, and the problem is likely to become even more widespread in the decades ahead. However, the most compelling reason for drawing attention to this situation is not its extent, but its grave consequences — not only for those workers whose educational skills are underutilized in the workplace, but also for the economic performance of individual firms and of the U.S. economy in general.

EDUCATION EXPANDED at a phenomenal rate in the U.S. over the last 20 years, particularly at the postsecondary level. Enrollments in higher education increased by more than 300% between 1960 and 1980. This growth was due to the so-called baby boom after World War II (an age group from which most college students were drawn in the late Sixties and early Seventies) and to an increase in college enrollment rates among all age groups, especially older Americans. As a result, the number of college graduates in the labor market increased threefold between 1960 and 1980.[5] By 1980 almost 20% of all U.S. workers and more than 25% of all young workers had completed four years of college or more (see Table 1).

The growth in the number of highly skilled jobs did not keep pace. The proportion of professional and managerial jobs in the economy remained at about 25% between 1960 and 1970 (Table 1), despite the large increase during this period in teaching jobs and in professional jobs with the government. Professional employment increased somewhat during the 1970s, even though the growth in government employment slowed considerably. During the interval between 1960 and 1980, fewer than one-third of all new jobs in the U.S. economy were in professional and managerial areas. Almost 50% of the new jobs were in clerical and service occupations, where a four-year college education is not a requirement for satisfactory work performance.[6] A college education may, in fact, be detrimental to workers in these areas.

Between 1960 and 1980 the number of college graduates in the U.S. labor market increased three times as fast as the number of high-level jobs. The failure of the economy to provide enough high-level jobs forced an increasing number of college graduates to accept positions for which they were overqualified. Most of this mismatching of workers to jobs occurred during the 1970s, when the U.S. economy experienced several recessions. The mass media and several scholarly publications called attention to the plight of college graduates during this period, particularly during the recession of 1974-75.[7] Some observers viewed these mismatches as a short-term problem that tends to occur during economic recessions. But other observers noted and called attention to the extended duration of the problem. Several studies show that large discrepancies existed between the educational levels of U.S. workers and the educational requirements of their jobs, even prior to the vast expansion of higher education in the 1960s.[8]

As early as 1960, about one-third of all young college graduates were employed in occupations other than high-level professional and managerial areas — jobs that did not require a college education for satisfactory work performance (Table 1).

Table 1. The Job Market for College Graduates, 1960-1990

	Actual			Projected
	1960 %	1970 %	1980 %	1990 %
Proportion of labor force with four years of college or more				
All workers	9.7	12.9	18.2	23.5*
Young workers	13.4	17.7	28.5	32.1*
Proportion of high-level jobs in economy	24.0	24.7	28.5	28.7
Proportion of young college graduates employed in high-level jobs				
Males	67.1	70.1	59.4	?
Females	71.7	76.5	59.0	?

*Based on the increase between 1980 and 1990 projected by Denis F. Johnston, applied to the actual 1980 figures reported above.

Sources: Russell W. Rumberger, "The Job Market for College Graduates, 1960-1990," *Journal of Higher Education*, in press, Tables 1, 2, 5, and 7; and Denis F. Johnston, "Education of Workers: Projections to 1990," *Monthly Labor Review*, November 1973, Table 3.

More than 20% of all recent female college graduates in 1980 were employed in secretarial or other clerical positions, a greater proportion than in 1960.

Although employment opportunities improved somewhat during the 1960s, they deteriorated steadily during the 1970s. By 1980 almost half of all recent college graduates were employed outside the professional and managerial occupations. More than 20% of all recent female college graduates in 1980 were employed in secretarial or other clerical positions, a greater proportion than in 1960.[9]

Other studies also reveal large disparities in the current economic positions of educated workers. In a recent survey, one-third of all adult workers reported that they have skills that they do not use in their current jobs.[10] More than 25% of recent college graduates reported that they are underemployed in their current jobs.[11] Meanwhile, the U.S. Bureau of Labor Statistics estimated that the 1980 labor force had a surplus of 3.8 million college graduates.[12]

THE SEEMINGLY poor economic position of many educated workers in the U.S. today would be more bearable if the future promised better conditions. But that does not appear to be the case. Government projections indicate that professional employment will grow more slowly in the 1980s than it did in either the 1960s or the 1970s.[13]

Many observers believe that high technology will be an important new source of job growth in the U.S. during the coming decades.[14] It is true that some high-level, technical occupations (e.g., computer systems analyst and aero-astronautic engineer) will be among the fastest-growing occupations during the 1980s, but these specialties will actually provide few jobs (Table 2). The 10 occupations that will produce the greatest numbers of new jobs in our future economy are unrelated to high technology; indeed, only one of these occupations — nursing — even requires a college education. Most new jobs will be in low-level service and clerical fields; janitors, sales clerks, and cashiers will be in demand.

Not only will high technology fail to produce a large number of new, high-level jobs directly, but the application of technology in the workplace seems likely to *decrease* the skills that many existing jobs now require. New and more sophisticated technologies, rooted in the microelectronics revolution, are rapidly transforming almost all areas of work. An increasing number of workers will use computers in their jobs. However, the use of increasingly sophisticated technologies does not require that workers have increasingly sophisticated skills. On the contrary, computers and other microelectronic devices have the capacity for making sophisticated decisions on their own. Thus the workers who operate these devices make fewer judgments and therefore have less need for high-level skills. For example, cashiers no longer need to know how to add and subtract, because modern cash registers carry out all the necessary computations.

The impact of technology on work depends on how the technology is applied. Employers have long recognized that they can reduce their labor costs by fragmenting jobs into component parts and then hiring workers with the minimal requisite skills (whose wages are lower than more highly skilled workers) to perform each set of tasks. Technology aids this process by enabling machines to perform more of these tasks. Whereas the earlier technologies enabled machines to perform physical tasks and thus displace physical labor, the newer technologies enable machines to perform mental tasks and thus displace mental labor. As machines become able to perform increasingly complex tasks, more and more workers are likely to need fewer and fewer high-level skills. For instance, secretaries no longer need highly developed spelling and typing skills, because word processors can automatically correct typing and spelling errors.

The ability of technology to displace mental, as well as physical, labor also means that machines can handle an increasing number of jobs on their own, thereby increasing unemployment rates. Robots and automatic tellers are only two examples of this phenomenon. The displacement of human workers by machines is most likely to occur among middle-level and semi-skilled jobs (those that pay from $9 to $12 an hour), rather than among low-paying service jobs. As a result, U.S. society may become increasingly bipolar, with some people employed in high-level

Table 2. Fastest-Growing Occupations in U.S. Economy, 1978-1990

	Relative Growth (Percentage Increase)	Absolute Growth (Number of Jobs)
Fastest Relative Growth*		
1. Data processing machine mechanics	148	69,000
2. Paralegal workers	132	38,000
3. Computer systems analysts	108	199,000
4. Computer operators	88	148,000
5. Office machine and cash register services	81	40,000
6. Computer programmers	74	160,000
7. Aero-astronautic engineers	70	41,000
8. Food preparation and service workers, fast-food restaurants	69	492,000
9. Employment interviewers	67	35,000
10. Tax preparers	66	16,000
Fastest Absolute Growth**		
1. Janitors and sextons	26	672,000
2. Nurses' aides and orderlies	55	594,000
3. Sales clerks	21	581,000
4. Cashiers	36	545,000
5. Waiters/waitresses	36	532,000
6. General clerks, office	23	530,000
7. Professional nurses	60	516,000
8. Food preparation and service workers, fast-food restaurants	69	492,000
9. Secretaries	21	466,000
10. Truck drivers	26	438,000

*Based on the percentage increase in the number of jobs created between 1978 and 1990.
**Based on the absolute growth in the number of jobs created between 1978 and 1990.
Source: Max L. Carey, "Occupational Employment Growth Through 1990," Monthly Labor Review, August 1981, Table 2. The 1990 figures are based on low-growth projections.

professional and managerial jobs while others are employed in low-level, low-paying service jobs. Still other individuals may fail to find work at all, since even a modest level of economic growth is unable to provide jobs for everyone.

Although the growth of job opportunities that require advanced schooling will be modest in the coming decade, the educational level of American workers will continue to increase. The number of young students will decline, but adult participation in higher education will continue to increase. Thus total enrollments in higher education are projected to remain fairly constant over this decade.[15] Moreover, as older, less well-educated workers retire from the U.S. labor force, they will be replaced by younger, better-educated workers. Consequently, the imbalance between education and work is likely to continue in the years ahead.

THIS IMBALANCE has adverse consequences for those workers who are forced to accept jobs for which they are overqualified. Many young people seek further schooling in order to secure more interesting and rewarding work. Even though higher education may enhance their personal lives, they feel frustrated, disappointed, and dissatisfied with their working lives when they are forced into less rewarding and less challenging jobs. Better-educated workers are generally more satisfied with their jobs than are poorly educated workers, but research shows that workers with more education than their jobs require are likely to suffer more job dissatisfaction than other workers.[16]

Workers with underused skills are also likely to be less productive. Industrial psychologists have long maintained that the interaction between workers' characteristics and the characteristics of their jobs affects workplace attitudes and behaviors — including job satisfaction, job performance, turnover, and absenteeism. Workers' characteristics include needs, skills and abilities, aspirations and expectations, and personality traits. Job characteristics include both technical aspects, such as salary and fringe benefits, and social aspects, such as relationships with fellow workers and supervisors.

Discrepancies between workers' characteristics and job characteristics can promote adverse responses in two ways. First, individuals whose skills are underused in their jobs are more likely than other workers to be dissatisfied, to have poor mental health, and to exhibit poor work performance. Second, workers with unfulfilled expectations — whether these expectations have to do with salary or with other job characteristics — display similar adverse responses.[17]

Nor are consequences of this condition confined to individual workers. Poor work performance, high turnover rates, and absenteeism affect the productivity of whole companies and of the entire economy. The U.S. enjoyed rapid growth in labor productivity through most of this century. This growth produced the highest standard of living in the world. By the mid-Sixties, however, growth in productivity slowed, and by the late Seventies labor productivity actually declined. Economists have demonstrated the significant contributions of education to economic growth, even during recent economic downturns. Thus the continued increase in the educational attainments of the U.S. workforce makes the recent decline in productivity all the more disturbing. It is probably no coincidence that this decline has occurred during a period when an increasing number of highly educated workers, especially college graduates, have moved into lower-level jobs that leave them unchallenged, dissatisfied, and unproductive.

THE SEVERITY of the consequences that arise from an imbalance between education and work suggests that action should be taken to address this situation. Individuals, employers, and government all play a role in furthering or erasing this imbalance. Individual decisions about participation in education affect the quality and quantity of educated labor available in the marketplace. Employers' decisions about how to organize work determine the number of jobs available in the market and the skills that these jobs require. Government decisions regarding subsidies and policies influence the decisions of individuals and of employers — and hence affect both the supply of educated labor and the demand for its services. Past decisions by individuals, employers, and the government have led to the current situation. Are future decisions likely to reduce the problem or exacerbate it?

No one knows for sure. The prevailing view is that employers will respond to the current situation through adjustments in market prices, thereby influencing the decisions of individuals and reducing the severity of the problem. If the number of college graduates entering the job market exceeds the number of available jobs requiring a college education, the earnings of college graduates should decline and enrollments in higher education should fall. But recent evidence suggests that the market has not responded in this fashion. The relative earnings of college graduates declined only slightly during the 1970s, even as the number of college-educated individuals entering the market increased rapidly and more of these entrants were forced to accept jobs for which they were overqualified.[18] And while enrollments in higher education among young people slowed during this period, adult enrollments rose rapidly. Thus the financial incentive to invest in higher education still remains quite high, and the best jobs in the U.S. will continue to go to those who have the most schooling. Furthermore, women and minorities are likely to in-

"I haven't decided definitely on a career yet, but I certainly don't want something that requires a lot of preparation."

Although shortages of certain skills will always exist in the labor market, an excess of skilled labor creates a more widespread and serious discrepancy.

crease their participation in higher education as a means of achieving social mobility.

As I have already pointed out, employers have a financial incentive to fragment work tasks and to decrease the skill requirements of jobs in order to reduce their labor costs. Therefore, even though they are faced with a better-educated and more highly skilled workforce, employers may be unable to use workers' education and skills in the short run. But some employers have recognized that, in the long run, they can more effectively use the abilities and talents of their employees by giving them more responsibility and more accountability for their actions and work. Experiments with these kinds of changes have markedly improved employee morale, turnover rates, and productivity.

In Sweden, for example, the employee turnover rate in one Saab/Trollhatten assembly plant decreased from 53% to 14% after management incorporated the workers into assembly teams that took over responsibility for internal assignments, scheduling, training, purchase and maintenance of equipment, and job rotation.[19] Unfortunately, such experiments are rare and unlikely to become more widespread, because they threaten traditional forms of control.

The government can play a central role in addressing the current imbalance. One possible action would be to reduce public support of education. Some critics argue that public subsidies at the postsecondary level are unnecessary, because private incentives to invest in additional schooling will insure an ample supply of trained labor.[20] But many people feel that the benefits of education to individuals and to the society justify continued high levels of public investment, despite the negative consequences of imbalance in the labor market. More important, many groups view education as the path to social mobility and thus strongly favor its continued support.

The government could also influence the demand for educated labor. Through public sector employment and through spending in the private sector, the government generates a substantial portion of the jobs in our economy and an even larger portion of high-level professional jobs.[21] The educational sector of government itself provides a large number of jobs in teaching, administration, and research. Thus continued support for government programs would help to insure a substantial number of high-level jobs in the U.S. The government could also influence the demand for educated labor in the private sector through tax incentives and other policies that retard the replacement of skilled labor by machines. The government could promote alternative types of work organizations, such as producer cooperatives, that generate more jobs at a given level of capital expenditure and provide flexible work environments that more fully use workers' skills, capacities, and talents.[22]

THE RECENT evaluations of the U.S. educational system are calling for reforms and a strengthening of education at all levels. Underlying this concern is a belief that the growth of the U.S. economy and its move into high technology require a significant upgrading of the education of the American workforce. A particular concern is that, as more workers use computers and other sophisticated devices in their jobs, they will need advanced skills in computer programming and other technical areas. There is a growing apprehension that failure to provide this training will leave a serious gap between the demands of work and the availability of properly trained workers that will slow economic progress and threaten the nation's ability to compete in the international marketplace.

But a mass of evidence suggests that the U.S. labor market already has an abundance of highly skilled workers whose talents are not fully used. Growth in the demand for skilled labor has failed to keep abreast of the vast growth in the supply of highly educated workers. Such workers find that their jobs lack challenges; worse yet, overqualified workers may be contributing to the slowdown in productivity that has plagued the U.S. for the last 15 years. Employment projections suggest that this imbalance is likely to become worse as future job growth favors low-skilled service and clerical positions. Although shortages of certain skills will always exist in the labor market, an excess of skilled labor creates a more widespread and serious discrepancy.

Education develops the human resources that help drive our economy. Many government officials and educators have called for increased investment in education in order to create a greater abundance of human resources for our economic future. Yet the more compelling challenge now facing the U.S. is to use effectively the human resources that already exist. To ignore this challenge will waste an important national resource; it could also threaten our future economic well-being.

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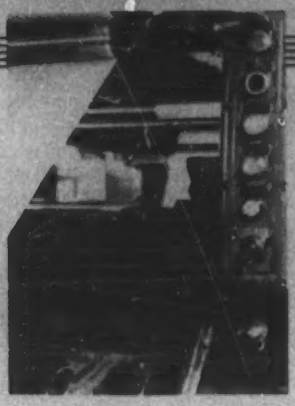
1. This situation also exists in other developed (and even underdeveloped) countries. See, for example, *Employment Prospects for Higher Education Graduates* (Paris: Organisation for Economic Cooperation and Development, 1981); and Rafael L. Irizarry, "Overeducation and Unemployment in the Third World," *Comparative Education Review*, October 1980, pp. 338-52.
2. For examples of the uses of these terms and for their various definitions, see Richard B. Freeman, *The Overeducated American* (New York: Academic Press, 1975); V. Lane Rawlins and Lloyd Ulman, "The Utilization of College-Trained Manpower in the United States," in Margaret S. Gordon, ed., *Higher Education and the Labor Market* (New York: McGraw-Hill, 1974), pp. 195-235; and Clifford C. Clogg, *Measuring Underemployment* (New York: Academic Press, 1979).
3. Freeman, p. 14.
4. Clogg, pp. 22-23.
5. Russell W. Rumberger, "The Job Market for College Graduates, 1960-1990," *Journal of Higher Education*, in press, Table 1.
6. Ibid., Table 2.
7. Freeman, *The Overeducated American*; and Caroline Bird, *The Case Against College* (New York: David McKay, 1975).
8. Rawlins and Ulman, pp. 198-208; and Ivar Berg, *Education and Jobs: The Great Training Robbery* (New York: Praeger, 1970), pp. 38-60.
9. Rumberger, Table 5.
10. Graham L. Staines and Robert P. Quinn, "American Workers Evaluate the Quality of Their Jobs," *Monthly Labor Review*, January 1979, Table 4.
11. A. Stafford Metz and Charles H. Hammer, *Labor Force Status of Recent College Graduates* (Washington, D.C.: National Center for Education Statistics, 1981), p. 3.
12. U.S. Bureau of Labor Statistics, *Occupational Projections and Training Data* (Washington, D.C.: U.S. Government Printing Office, 1982), p. 11.
13. Rumberger, Tables 2 and 7.
14. Henry M. Levin and Russell W. Rumberger, "The Low-Skill Future of High Tech," *Technology Review*, August/September 1983, pp. 18-21.
15. National Center for Education Statistics, *The Condition of Education* (Washington, D.C.: U.S. Government Printing Office, 1982), p. 128.
16. Berg, *Education and Jobs . . .*; and Robert P. Quinn and Martha S. Mandilovitch, *Education and Job Satisfaction: A Questionable Payoff* (Ann Arbor: Survey Research Center, University of Michigan, November 1975).
17. Russell W. Rumberger, *Overeducation in the U.S. Labor Market* (New York: Praeger, 1981), Ch. 5.
18. Rumberger, "The Job Market for College Graduates. . . ," Table 5.
19. John Logue, "Saab/Trollhatten: Reforming Work Life on the Shop Floor," *Working Life in Sweden*, June 1981, pp. 1-4.
20. See, for example, Milton Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962), Ch. 6.
21. Martin Carnoy, Derek Shearer, and Russell Rumberger, *A New Social Contract* (New York: Harper & Row, 1983), Ch. 6.
22. Henry M. Levin, "The Workplace: Employment and Business Interventions," in Edward Seidman, ed., *Handbook of Social Interventions* (Beverly Hills, Calif.: Sage, 1983). □



NEWSNOTES

KAPPAN Special Report

The 1983 SAT Scores And Their Link to Nuclear Fallout

by Ernest J. Sternglass and Steven Bell

FOR THE THIRD year in a row, Scholastic Aptitude Test (SAT) scores for the U.S. as a whole remained steady or, in some cases, actually began to rise again, after nearly two decades of steady decline. This pattern is consistent with our hypothesis: that the principal factor influencing the score decline was the massive amount of iodine-131 produced by nuclear fission during the years of heavy atmospheric testing of nuclear bombs.[1] Iodine-131 is known to concentrate in the thyroid glands of infants, where hormones that control brain development are produced.

The U.S., Great Britain, and the Soviet Union signed an atmospheric test-ban treaty in 1963, after which only France and China continued to carry out atmospheric tests. This caused the large-scale production of short-lived iodine-131 to decline sharply. Our hypothesis thus predicts a reduction in the cognitive damage to infants (as reflected in scores on the SATs administered to high school juniors and seniors some 17 to 18 years after the cessation of atmospheric testing).

A recent article in the *Kappan* questioned this hypothesis.[2] Therefore it is important that we subject the hypothesis to further testing by examining the newly available data on 1983 SAT scores.[3]

To support our hypothesis that bomb fallout led to cognitive damage during early infant development, we would have to find relatively abrupt declines or rises in the test scores of high school juniors and seniors some 17 to 18 years after the atmospheric nuclear tests began or ended — and these changes would have to fall into definite geographical patterns, in accordance with the distance of the test takers, as infants, from the sources of the fallout.

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Thus, unlike socioeconomic, educational, and medical factors (such as smoking) that cause changes only slowly and are more nearly nationwide, the changes caused by short-lived fallout can vary dramatically in a single year and will show large geographical differences, which depend on the direction of the drift of fallout clouds and on local patterns of rainfall.

THIS IS precisely what the latest state-by-state data on SAT scores show. The changes in average scores on both the verbal and the mathematics subtests vary widely by state. For example, as Figure 1 shows, scores rose in the band of central states that stretches from Nevada to Pennsylvania and New Jersey. At the same time, scores declined in the northernmost states — but more so in the Pacific Northwest than in extreme northern states to the east (e.g., northern New England).

Thus, while all the central states (those lying roughly in a line from Nevada to New Jersey) registered rises in SAT scores that averaged 2.6 points, states in the northernmost tier (those stretching from Alaska to Maine) registered declines that averaged three points. The greatest decline (nine points) occurred in Alaska. Declines became progressively smaller as one moved east; Vermont and New Hampshire actually registered one-point increases, while Maine held steady.

Our hypothesis predicts precisely this pattern. The first atmospheric bomb tests carried out by China, in October 1964 and in May 1965, produced large amounts of iodine-131. At that time, scientists measured high fallout levels all across the northern U.S. and Canada. Lesser amounts of fallout passed southward along the Pacific coast and across the Gulf coast states.

In sharp contrast, the dry central states that lie downwind or to the east of the Nevada test site uniformly showed either large rises or no declines in 1983 SAT scores — exactly as our hypothesis would predict, given the cessation in 1963 of large-scale atmospheric tests in Nevada. Again, just as we would expect, Utah — which earlier experienced the greatest test score declines attributable to the atmospheric tests in Nevada — also experienced the greatest rise or "rebound" in SAT scores in 1983. The average verbal score for all the central states rose by 2.6 points, while the average verbal score in Utah rose by an unprecedented 14 points in a single year. Clearly, we cannot attribute this large rise to an overnight improvement in the quality of Utah schools or to a sudden reduction in the time spent watching television that occurred only in the Nevada/Utah area.

Thus it appears that the onset of atmospheric bomb testing by the Chinese in 1964, following the cessation of atmospheric tests in Nevada a year earlier, has provided yet another confirmation of our hypothesis: that the unexpectedly severe biological action of fallout on the thyroids of developing infants accounts for most of the earlier, sudden decline and for the recent rise in average SAT scores for the U.S. as a whole — despite the fact that only a relatively small number of weapons were detonated, and those in remote areas such as the western deserts of both the U.S. and China.

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1. For a more detailed discussion of this hypothesis and its supporting evidence, see "The Nuclear Radiation/SAT Decline Connection," *Phi Delta Kappan*, November 1979, pp. 184-87; and Ernest J. Sternglass and Steven Bell, "Fallout and SAT Scores: Evidence for Cognitive Damage During Early Infancy," *Phi Delta Kappan*, April 1983, pp. 539-45.

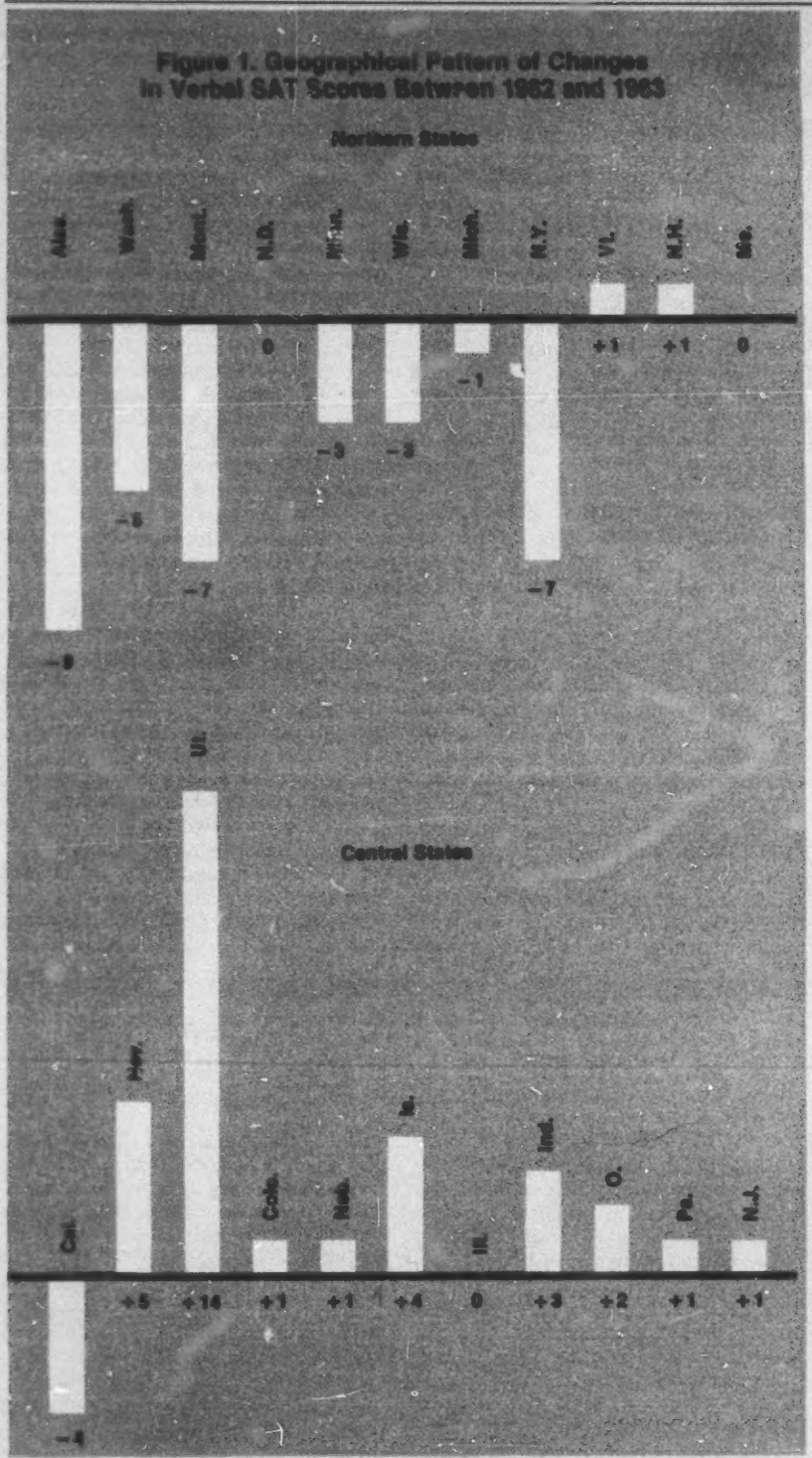
2. Robert Ehrlich, "The Link Between Radioactive Fallout and SAT Scores Is Nonexistent," *Phi Delta Kappan*, June 1983, pp. 729-30.

3. College Board, 888 Seventh Ave., New York, NY 10018, 17 September 1983. □

New NIE Price Index Shows School Costs Have Doubled Between 1975 and 1982

THE COST OF running elementary and secondary schools nearly doubled between 1975 and 1982. Employee fringe benefits and utility prices contributed substantially to the increase, according to a newly devised measure of school expenses.

Goods and services that schools paid $100 for in 1975 cost them $181.70 in 1982, the National Institute of Education (NIE) reports in a new book, *Inflation*



Measures for Schools and Colleges. While total school costs rose 81.7% between 1975 and 1982, employee fringe benefits increased 179.7%, and utility expenses increased 184.6%. Salaries for teachers and other professionals went up 65.8% over the seven-year period covered by the NIE study. These and more than 100 other school expenditures have been combined to make up the School Price Index (SPI), a new measuring device formulated by Kent Halstead, NIE senior associate.

According to Halstead, the SPI tracks price changes in salaries, fringe benefits, supplies, materials, equipment replacement, books and periodicals, utilities, and fixed costs. Capital outlay and debt service are not included in the index. The SPI is a "market basket" index, with costs of goods and services repriced each year and compared with the costs for the base year (1974-75).

The SPI documents the amount of money needed for "business as usual," Halstead said. "Few financial supporters can deny that funding should at least maintain the status quo. Price indexes reliably report increased funding requirements that can be defended as essential, if services are to be maintained."

Copies of *Inflation Measures for Schools and Colleges* are available for $6 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, Stock No. 065-000-00186-1. A 1983 update to the SPI is available for $25 from Research Associates of Washington, 2605 Klingle Rd., N.W., Washington, DC 20008. Ph. 202/966-3326.

Material for this column was provided by Education Daily, *published by Capitol Publications, Arlington, Va.*

Aliens in Texas Pay for Public Services Through Taxes, Study Finds

UNDOCUMENTED ALIENS in Texas pay more than enough in taxes to compensate for the public services they receive, including education, researchers at the University of Texas have found. In a study of the costs of providing education, health, social, and criminal justice services for undocumented aliens, the researchers learned that aliens pay more in federal income, sales, and excise taxes than is spent on programs for them.

A conservative comparison of the highest estimated program costs and the lowest estimated revenues from aliens showed that Texas spent $97 million for public services last year, while it pulled in at least $157 million in tax revenues from aliens. "I'm sure that the public impression is that undocumented workers are draining the tax base," said Gilberto Cardenas, co-director of the study. "That is not true."

However, sociologist Cardenas and public affairs researcher Sidney Weintraub also looked at the cost/revenue picture for six urban areas of Texas. They found that these cities bear a greater cost for serving undocumented aliens than tax receipts can cover.

Austin, Dallas, Houston, San Antonio, El Paso, and the McAllen area in the Rio Grande Valley spent as much as $35 million on services to aliens, but they collected only $5 million to $8 million

in taxes from aliens, the researchers estimated. When costs and revenues are broken down by state and local levels, local governments bear the brunt of the cost burden, and the state receives the bulk of the revenues, they concluded.

In an unsuccessful case before the U.S. Supreme Court, Texas fought against providing free schooling to undocumented aliens. But the state used inflated estimates of the illegal alien population in Texas, Cardenas said. Texas warned that more than 100,000 undocumented aliens would flood the schools following the High Court decision in *Doe* v. *Plyler*. But, in the wake of that ruling, the Texas Education Agency last year counted fewer than 20,000 undocumented aliens in Texas schools, according to Cardenas.

For more information on this study, contact the Office of Public Affairs, Lyndon B. Johnson School of Public Affairs, University of Texas, Austin, TX 78712. Ph. 512/471-4962, ext. 218.

Senate Votes to Table Proposal to Establish Tuition Tax Credits

IGNORING PLEAS from President Reagan, the Senate knocked down the Administration's proposal of tuition tax credits for the parents of private school students. Just before adjourning for the year, in what was considered a test ballot on the issue, the lawmakers voted 59-38 to table an amendment to establish federal tuition tax credits of up to $300 a year by 1986 for taxpayers who earn less than $50,000. The vote sends the credits into legislative oblivion — at least until the next session of Congress convenes this month.

Opponents of the tax credit proposal began to filibuster after Senate Majority Leader Howard Baker surprised them by suddenly bringing up the bill to which the credits were to be attached. Baker brought up the measure because President Reagan wanted a vote before adjournment.

Feeling certain that they had enough votes to table the amendment, the opponents decided to allow the vote, after making certain — through the initial filibuster — that everyone knew they disapproved of having it slipped in at the end of the session, according to an aide to Sen. Ernest Hollings (D-S.C.), leader of the fight against the credits.

"Here we are rushing to adjournment. It just doesn't make any sense to bring up something as hotly contested as tuition tax credits at the last minute," said Hollings's legislative director, Ashley Thrift.

During floor debate, the rush to act on the measure was termed "precipitous and almost reckless" by Sen. Robert Stafford (R-Vt.), chairman of the education, arts, and humanities subcommittee. The discussion is "narrowly political," and the Senate "should hesitate before doing anything to jeopardize" the public schools, Stafford said in urging a vote to table the measure.

Hollings termed the measure a "ripoff for the rich" and said Reagan's interest in the proposal shows that "public schools come last" in the President's education priorities. Sen. Robert Dole (R-Kan.), chairman of the Senate Finance Committee, who led the push for the measure, countered, "None of us are standing back one inch from public education."

Tuition tax credits have gone nowhere in the House.

Sixth Circuit Rules That Courts May Not Interfere With Educational Decisions

A FEDERAL appeals court has upheld the right of school officials to select the best program for a handicapped child. The judiciary has no right to interfere with educational decisions, the court said.

The parents of Thomas Rettig — in 1979 a 16-year-old autistic child — asked that the U.S. District Court for the Northern District of Ohio order the Kent City School District to provide their son with specific programs, such as summer classes and year-round therapy. The lower court refused to require the programs, and the Sixth Circuit agreed.

Judge Robert Krupansky of the Sixth Circuit ruled that the parents' arguments that their son was denied a free and appropriate public education "merely reflect a difference of opinion as to the most effective teaching methods available." Basing his decision on the U.S. Supreme Court's ruling in *Board of Education* v. *Rowley*, Judge Krupansky wrote, "The courts are not free to choose between competing educational theories and to impose that selection upon the school system." In *Rowley*, Krupansky noted, the Court ruled that a state would be in compliance with the Education for All Handicapped Children Act, P.L. 94-142, if it followed the procedures outlined in the law and if the educational program developed through the procedures was "reasonably calculated" to enable a child to receive educational benefits.

Thomas's mother, Eva Rettig, who represented her son in the case, *Rettig* v. *Kent School District*, declined to comment on the decision. She said it was "premature" to say whether she plans to ask the Supreme Court to review the decision.

Frederick Compton, the attorney for the school district, said he is "extremely pleased" with the decision, which is "a complete and total win for us." The lower court had ruled against the school district on one point, ordering it to provide one hour of extracurricular instruction a week for Rettig. But the Sixth Circuit reversed that part of the lower court decision.

Administration Policies on Education Funding And Title IX Are Out of Step with Public Opinion

PRESIDENT REAGAN'S policies on education funding and Title IX are out of step with the opinions of the majority of Americans, according to a poll of 1,023 people conducted for the Project on Equal Education Rights (PEER).

The poll found that 68.3% of Americans believe federal laws against sex bias should cover all students in a school, even those in athletic and other programs that do not receive direct federal support. Only 20.1% agreed with the position taken by the Justice Department that sex bias laws should cover only those students in programs that receive federal funds directly. Attitudes on Title IX varied by political affiliation: 23.8% of Republicans favored the narrower interpretation of the law, but only 19.9% of Democrats did so.

The poll taken by PEER — a project of the Legal Defense and Education Fund of the National Organization for Women — also found that 42% of all Americans would vote for a Presidential candidate who made education a higher priority than defense. Only 22% would not. Another 27% of the sample said that they would vote for the candidate whose top priority was helping the poor; only 22% said a strong defense should be the top priority.

On the matter of federal aid, 66% said it is very important in upgrading schools, and another 27% said it is somewhat important. Democrats were far more likely to rank federal dollars as very important than were Republicans, although 59.3% of Republicans called federal aid very important for improving the schools.

The poll, conducted by Research and Forecasts, Inc., a public opinion research firm, also found that 88% of the public feel that schools encourage female students to choose their own courses of study, even such traditionally male subjects as mechanics and mathematics.

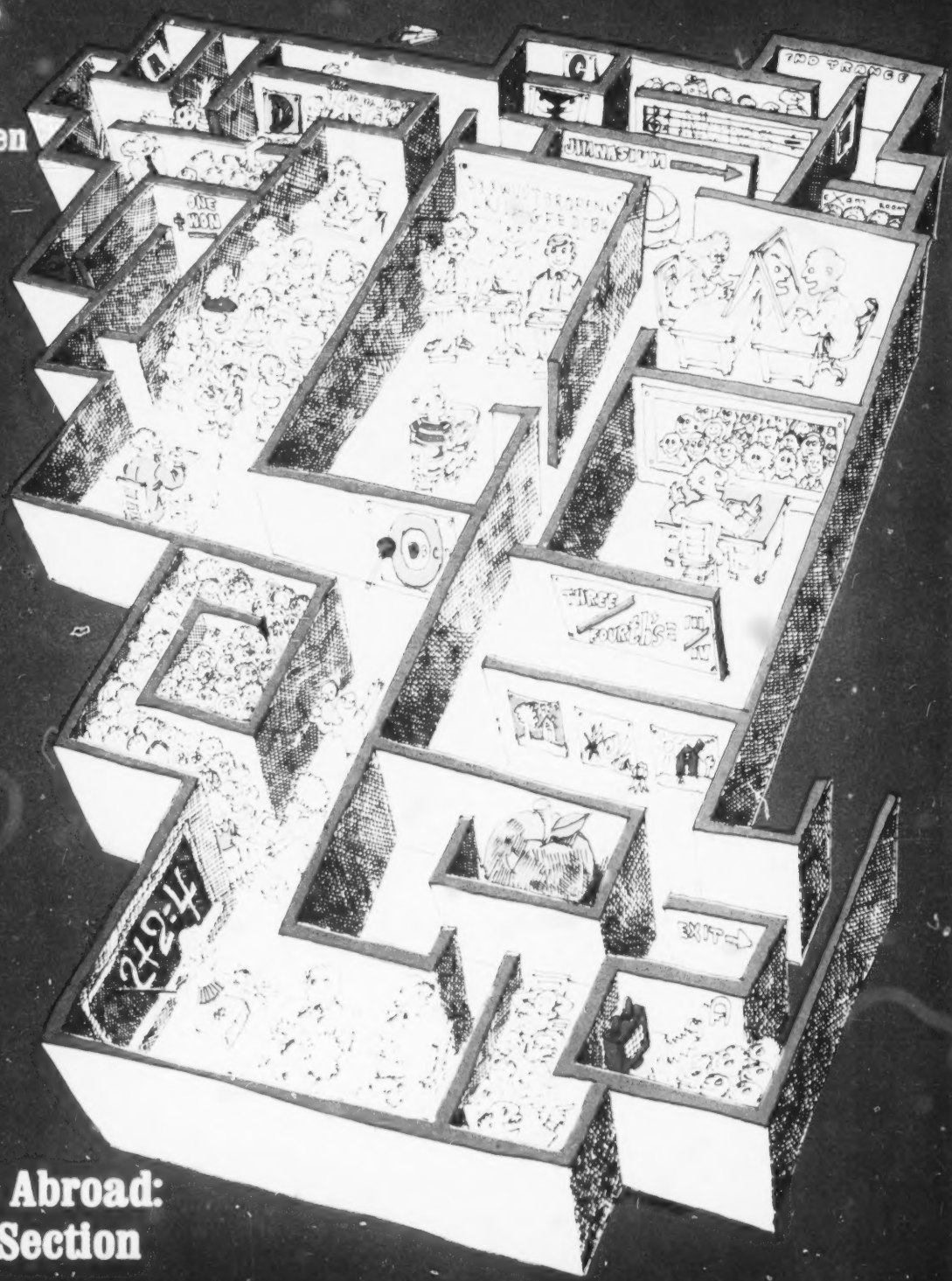
PHI DELTA

KAPPAN

March 1984

Can Research Influence Practice?

- Elliot Eisner
- Eva Baker
- Mark Yudof
- Arthur Jensen



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Sex Education: An Overview Of Current Programs, Policies, and Research

by Asta M. Kenney and Margaret Terry Orr

Is there a new, more approving climate for sex education? Possibly, but sex education remains controversial, despite the enormous diversity of program offerings nationwide.

IN JUNE 1981, the Alexandria, Virginia, school board ventured into new territory. It approved an eighth-grade sex education course that included discussion of masturbation, homosexuality, incest, venereal disease, and contraception – all placed in the context of personal values. One board member voiced his surprise at the ease with which the course was adopted, as compared with an earlier experience in neighboring Fairfax County. "I thought we'd have a tremendous fight about the Fairfax Five [birth control, venereal disease, abortion, homosexuality, and rape and incest]," he said, "but we didn't." Is the Alexandria experience indicative of a new climate for sex education?

The sharp increases in sexual activity, pregnancy, abortion, and out-of-wedlock births over the past decade (see Tables 1 and 2) are of profound concern to many Americans. Almost 40% of today's 20-year-old women have had at least one pregnancy while in their teens. Twenty-one percent have had at least one birth, and more than one in seven have had at least one abortion.[1]

The reasons for statistics such as these are complex and not fully understood. Many experts believe that they are related to such factors as changing societal values that make sexual activity and out-of-wedlock childbearing more acceptable, changing family structures, the portrayal of sex in the media, the earlier maturation of teenagers today, and the ready availability of methods of birth control. To some extent, however, a situation that has always existed is simply more visible because more comprehensive data have become available.

In the face of a host of societal pressures favoring early sexual experiences, it is remarkable that births to teenagers declined significantly over the past decade, that pregnancies increased more slowly than might have been expected in light of the sharp increase in sexual activity, and that the out-of-wedlock birthrate climbed less sharply than in the 1960s.[2] These trends are certainly due, at least in part, to the increased availability of information and contraceptive services and to the legalization of abortion nationwide in 1973.

The need for sex education is confirmed by the fact that 36% of first premarital pregnancies occur in the first three months of sexual activity, before most of the young women have sought effective methods of contraception.[3] Society has few ways of preventing unintended teenage pregnancies. Sex education is one method that offers two great advantages: it can reach all young people before they become sexually active, and information can be provided to them at relatively low cost through the schools and other delivery systems.

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Table 1. Teenage Pregnancies and Their Outcomes: 1980, 1973, and 1970

	Pregnancies*	All Births	Out-of-Wedlock Births	Abortions*	Miscarriages*
1980					
Ages 13-19	1,181,000	562,000	272,000	460,000	159,000
Under 18	469,000	208,000	131,000	199,000	62,000
1973					
Ages 13-19	1,008,000	617,000	205,000	243,000	148,000
Under 18	442,000	251,000	111,000	128,000	63,000
1970					
Ages 13-19	997,000	656,000	201,000	190,000	151,000
Under 18	370,000	235,000	107,000	80,000	55,000

*Figures for pregnancies, abortions, and miscarriages for 1970 are estimates.

Sources: Pregnancies: *Factbook on Teenage Pregnancy, Tables and References for Teenage Pregnancy: The Problem That Hasn't Gone Away* (New York: Alan Guttmacher Institute, 1981); and Alan Guttmacher Institute, unpublished data. Births: National Center for Health Statistics, *Advance Report of Final Natality Statistics, 1980* (Washington, D.C.: Department of Health and Human Services, 1982); and idem, *Teenage Childbearing: United States, 1966-75* (Washington, D.C.: Department of Health, Education, and Welfare, 1977). Out-of-wedlock births: National Center for Health Statistics, *Advance Report . . .*; idem, *Teenage Childbearing . . .*; and Alan Guttmacher Institute, unpublished data. Abortions: Stanley K. Henshaw and Kevin O'Reilly, "Characteristics of Abortion Patients in the U.S., 1979 and 1980," *Family Planning Perspectives*, January/February 1983, p. 5; *Factbook . . .*; and Alan Guttmacher Institute, unpublished data. Miscarriages: *Factbook . . .*; and Alan Guttmacher Institute, unpublished data.

Table 2. Proportion of Unmarried Teenage Females and Males in Metropolitan Areas Who Were Sexually Active at Selected Ages, 1979 and 1971

Females	Age 15 %	Age 17 %	Age 19 %
1979	22	48	69
1971	14	26	46
Males			
1979	--	56	78

Source: *Factbook on Teenage Pregnancy, Tables and References for Teenage Pregnancy: The Problem That Hasn't Gone Away* (New York: Alan Guttmacher Institute, 1981).

FOR SEVERAL decades, sex education sought to help young people understand the physical changes associated with puberty, the biology of reproduction, and the responsibilities of family life. Today, however, most Americans believe that sex education should also address the complex problems of human sexuality that young people face. But a few people still believe that sex education – particularly when it covers methods of contraception – actually increases teenagers' sexual activity, causes an upswing in unintended pregnancies among that age group, and undermines the family unit. Thus sex education remains controversial.

Not surprisingly, sex education programs today are enormously diverse. They range from a short unit on menstruation to comprehensive family-life education programs that begin in kindergarten and continue through grade 12. Program goals are equally diverse. They include helping young people feel more comfortable about their sexuality, contributing to a better understanding between the sexes, and, in some cases (albeit relatively few), preventing teenage pregnancies. In addition to public and private schools, the sponsors of sex education programs include YWCAs, YMCAs, Boys and Girls Clubs, church groups (including Catholic ones), Scout troops, family-planning clinics, local health departments, and many other organizations and institutions.

Given the wide variety of programs, it is difficult to present a full and coherent picture of them all. We will focus primarily on those programs operated by public high schools – particularly those programs that seem likely to contribute to a reduction in unintended teenage pregnancies. But we must first point out the fact that relatively little research on sex education has been conducted, and much of the existing research consists of small-scale studies of local programs or suffers from the lack of a uniform definition of "sex education." Although we have made every effort to present the findings of the largest and most reliable studies, these data are by no means all-inclusive or conclusive.

Public Support

Numerous polls demonstrate broad support for sex education in the schools. In a National Broadcasting Company/Associated Press (NBC/AP) poll in 1981, for example, 75% of respondents said that they approved of sex education in the public schools.[4] More recently, a 1982 survey by the National Opinion Research Center found that 82% of adult respondents supported such programs.[5] Moreover, as Table 3 shows, such approval has been growing since the mid-Sixties.

Polls also show strong support for including information on methods of birth control in sex education courses. In a 1981 survey of voters by Yankelovich, Skelly, and White, 70% of the respondents said that they approved of disseminating information on birth control in sex education classes.[6] And, as Table 3 shows, a 1977 Gallup poll found that 69% of the respondents approved of this practice.

Parents strongly support sex education in the schools. Indeed, they are more likely to be supportive than other adults – by a margin of 80% to 70% – according to the 1981 NBC/AP poll. Moreover, the 1977 Gallup poll showed no major differences between men and women, whites and nonwhites, Catholics and Protestants, or Democrats and Republicans in their support of sex education.[7]

Teenagers also believe that sex education is important. A University of Michigan survey of high school seniors in 1978 showed that 84% of those who had received sex education in school – and 88% of those who had studied birth control – considered these studies worthwhile. Seventy-eight percent of seniors who did not have any instruction and 77% of those who did not have instruction that included information on birth control wished that they had received such instruction.[8] A 1978 Gallup youth survey found that, among 13- to 18-year-olds, 82% of those who had taken part in a sex education course thought it helpful; instruction that included birth control information was almost twice as likely to be rated "very helpful" as instruction that did not.[9]

Opinions among educators are consistent with opinions among other segments of the population. A 1982 survey of school board members and school superintendents in Indiana showed that 82% approved of sex education in their schools, 49% considered contraception an essential topic, and an additional 31% believed that this topic should "probably" be included.[10]

Although Americans support sex education in the schools, they still believe that parents have the *primary* responsibility for talking to their children about sex-related topics. In a 1979 survey by Yankelovich, Skelly, and White, 84% of the parents of teenagers said that it was up to them to teach their youngsters about birth control.[11] However, parents say that they want assistance. A 1981 survey in Fresno, California, showed that 81% of a large sample of parents with children between the ages of 10 and 17 thought that they "should not be the only ones to provide sex education"; 70% believed that the schools should also provide such instruction.[12]

Clearly, parents prefer to have some say about whether their youngsters will be exposed to sex education and what form

Table 3. National Opinion Research Center (NORC) and Gallup Poll Findings On Sex Education in the Schools

	NORC*			Gallup**			Gallup†		
	Approve %	Disapprove %	No Opinion %	Approve %	Disapprove %	No Opinion %	Approve %	Disapprove %	No Opinion %
1982	82	15	3						
1977	77	21	2	77	16	7	69	6	2
1975	76	20	4						
1974	79	17	4						
1970				65	28	7	36	23	6
1969				71	22	7	55	12	4
1965				69	22	9	46	18	5

*Question: "Would you be for or against sex education in the public schools?"
**Question: "Do you approve or disapprove of schools giving courses in sex education?"
†Question: "Would you approve or disapprove if [sex education] courses discussed birth control?"
Sources: *General Social Surveys, 1972-1982: Cumulative Codebook* (Chicago: National Opinion Research Center, 1982); and "Growing Number of Americans Favor Discussion of Sex in Classroom," news release from the Gallup Organization, Princeton, N.J., 23 January 1978.

Fewer than 20% of the parents who were surveyed said that sex education gives children an unhealthy view of sex.

that instruction will take. Public support for sex education drops significantly if it is offered without parental consent: a 1980 Gallup poll found that 79% of adults supported sex education with parental consent — but only 34% approved of such instruction without parental consent.[13]

Consistent with their support for sex education, most Americans also think that such instruction is likely to be beneficial. According to the 1981 NBC/AP poll, 67% of adults believe that sex education classes give students a healthy view of sex; moreover, parents of school-aged or younger children are more likely than other adults to hold this view. Fewer than 20% of the parents who were surveyed said that such instruction gives children an unhealthy view of sex. Meanwhile, only 12% of adults (9% of parents and 14% of nonparents) said that they believed that sex education will "encourage" students to become sexually active.

Several studies show that virtually all parents translate their support of sex education into practice by permitting their youngsters to enroll in sex education courses when they are offered. For example, a recent evaluation of family-life education programs in 12 California school districts, in which 18,000 junior and senior high school students participated, showed that 81% of the parents supported the program; over a two-year period, fewer than 2% of the parents chose to keep their children from participating.[14]

Finally, controversy about a program does not always indicate community opposition to sex education. Rather, it may reflect concern about the topics to be included, the lack of parental involvement, or the teacher's credentials. In most cases, an airing of these concerns does not jeopardize the program. A 1971 study of a national sample of large school districts found that three-fourths of the districts that considered instituting sex education actually adopted a program; of those that initially turned down sex education, many later reconsidered and adopted it. Furthermore, once a program was in place, fewer than 10% encountered opposition strong enough to lead to its elimination or curtailment. Indeed, almost half of the districts later expanded their programs as a result of the opposition.[15]

Prevalence of Sex Education

Sex education is more prevalent than it used to be. The 1971 study of large school districts showed that approximately 55% of them offered sex education programs.[16] In 1977, 36% of public high schools (*not* school districts) offered *separate courses* in family-life or sex education, according to a 1977 survey by the National Institute of Education.[17] Meanwhile, an Urban Institute survey of almost 200 school districts in large U.S. cities in 1982 showed that three out of four school districts with junior and/or senior high schools offered some sex education — though not necessarily separate courses on that subject — in some or all of their schools.[18] An analysis of school and community characteristics, using data from the NIE survey, revealed that no one type of school or community is significantly more likely than others to offer a sex education course.[19]

Surveys of students to determine whether they have received sex education reinforce these findings. For example, a Johns Hopkins University study in 1979 found that, in a national sample, 76% of females between the ages of 15 and 17 and of males between the ages of 17 and 18 had received some classroom instruction on human sexuality.[20] A 1978 University of Michigan survey of U.S. high school seniors showed that 60% had taken a unit on sex education while in high school.[21] A Gallup poll of 13- to 18-year-olds that same year found that 43% had taken a separate sex education course.[22]

Content and Practice

Two major national studies provide insight into the content and organization of sex education in public secondary schools. One is an analysis by the Alan Guttmacher Institute (AGI) of a 1978 National Institute of Education survey of sex education teachers in more than 200 public high schools that offered sex education courses.[23] The other is the 1982 Urban Institute survey of almost 200 school districts in large cities.[24] Despite the five-year interval between these studies and their different approaches, their findings are remarkably similar.

Sex education courses have many titles (family-life education, human growth and development, and health education, to mention only a few), and these titles often reflect the differing content and emphases of the courses. Regardless of what they are called, these courses are considered a part of basic education, according to the school officials who responded to these surveys. The primary goals of the courses, these officials say, are to increase students' knowledge about human sexuality and to help them make responsible decisions about their lives. In only 37% of the programs described by the AGI study is the reduction of teenage pregnancy considered a primary goal. This holds true whether sex education is taught separately or as part of another course. Moreover, instruction is remarkably comprehensive; about 18 topics — ranging from "drugs, alcohol, and sex" to "love and marriage" — are generally covered.

Given the goals of most sex education programs, it is not surprising that both surveys show the most frequently covered topics to be anatomy and physiology, pregnancy and child-bearing, and venereal disease (Table 4). Approximately 75% of the programs also provide information about contraception, abortion, and the likelihood of teenage pregnancies. This information, according to the Urban Institute survey, is usually introduced in grade 9 or 10. But these topics are apparently not covered in depth; only 60% of the districts that provide sex education devote one or more class periods to contraception, according to the Urban Institute survey — although 82% of the districts devote at least that much time to the study of bodily changes during puberty.

The 1978 University of Michigan survey of high school seniors reported that 49% had studied birth control in school, and the 1978 Gallup poll of somewhat younger teenagers found that 31% had been taught about contraception. A national survey in 1979 of unmarried females between the ages of 15 and 19 and of unmarried males between the ages of 17 and 21 found that about 65% had studied contraception — a higher figure that is probably explained by the facts that this study involved older teens in metropolitan areas and that the question covered both school and nonschool instruction.[25]

Topics such as alternatives to abortion, avoiding unwanted sex, and other moral issues are often included in the curriculum. But such controversial issues as masturbation, homosexuality, and (particularly) sexual techniques are covered more rarely, according to both surveys.

If not taught as a separate course, sex education is almost always integrated into such other subjects as family living, home economics, biology, or physical education and, according to the Urban Institute survey, generally occupies six to 20 hours of class time per year. The AGI study found that most instructors reported that their high school *courses* in sex education last five to 20 hours per semester, and 92% said that these courses are coeducational. The Urban Institute found that, at the junior high level, instruction is more frequently segregated by sex, with only 70%

If teenage females are sexually active, those who have had sex education seem less likely to become pregnant.

of the classes enrolling both boys and girls.

The AGI study found that teachers of high school sex education courses generally are certified in physical education, home economics, science, or social studies. Most teach these subjects in addition to sex education, and more than half had taught sex education for five years or more at the time of the survey. The average age of the teachers was 38, and slightly more than half were male. The most commonly used instructional methods were lectures and group discussions; 86% of the teachers used commercially developed instructional materials, but many also said that they prepared their own supplementary materials.

State laws and policies strongly encourage (and, in some cases, mandate) parental and community participation in planning for sex education. Surprisingly, the AGI study found that only 28% of the high schools that offered sex education had involved parents in the development of the curriculum. A similar proportion of these high schools (29%) require parental permission for students to participate; many others undoubtedly allow parents to request that their children be excused from instruction. Only 12% of these high schools actually involve parents in classroom discussions. However, the AGI study showed that, when parents are involved in curriculum development, more topics (and more controversial topics, such as masturbation and homosexuality) are included in the sex education program.

Effects of Sex Education

One of the most complex and least explored issues related to sex education is the critical question of its effectiveness. Sex education programs face an awesome task: attempting to modify, in a few hours of classroom instruction, the messages that young people receive every day from their friends, the mass media, and other sources. Furthermore, the link between knowledge and behavior is tenuous and difficult to prove, particularly since parents and educators may be reluctant to ask students sensitive questions about their knowledge of sex-related topics, their behavior, and their values.

Very few sex education programs have been systematically evaluated, and most of the evaluations that have been conducted have focused on college, rather than high school, classes. There have been virtually no attempts to conduct follow-up studies to ascertain the long-term effects of sex education on students' knowledge, attitudes, and behavior.

However, a new nationwide study, conducted by researchers at Johns Hopkins University, does address the central question of the relationship between sex education and adolescent sexual activity, the use of contraceptives, and pregnancy.[26] The authors concluded that "the data seem to provide overwhelming support for the claim that the decision to engage in sexual activity is not influenced by whether or not teenagers have had sex education in school." They also found no association between sexual activity and courses that cover contraception. Perhaps the most important finding is that, if teenage females are sexually active, those who have had sex education seem less likely than others to become pregnant. Approximately 60% more white females and 70% more black females became pregnant if they had *not* received sex education than if they had. The researchers also found that young women who had received sex education that included discussions of contraceptive methods appeared somewhat more likely to use contraception the first time they engaged in intercourse and thereafter than those who had not received such instruction.

A federally funded review of the literature three years earlier reached one of the same conclusions arrived at by the Johns Hopkins researchers: no evidence supports the beliefs that sex education will increase *or* decrease the sexual activity of participants.[27] Meanwhile, other earlier studies have shown that sex education increases knowledge, as measured by tests before and after instruction. Studies of the long-term retention of such knowledge are lacking; however, a national survey in 1976 found that, among a large sample of 15- to 19-year-old females, those who had taken a sex education course at some

Table 4. Content of School Sex Education Programs

Alan Guttmacher Institute/ National Institute of Education (1978)		Urban Institute (1982)	
Topic	Frequency of Inclusion %	Topic	Frequency of Inclusion %
Anatomy and physiology	90	Physical differences	98
Pregnancy and childbirth	96	Pregnancy and childbirth	90
Venereal disease	97	Sexually transmitted diseases	96
Teenage pregnancy	90	Consequences of teen pregnancy	85
Contraceptive methods	78	Contraceptives	72
		Sources of family planning services	77
		Most likely time in cycle for pregnancy	79
Abortion	78	Abortion	47
Abortion alternatives	73		
Avoiding unwanted sex	65	Resistance to peer pressure for sex	76
Moral values	70	Personal values	82
Sexual techniques	6		
Masturbation	53	Masturbation	57
Homosexuality	52	Homosexuality	40

Sources: Margaret T. Orr, "Sex Education and Contraceptive Education in U.S. Public High Schools," *Family Planning Perspectives*, November/December 1982, p. 304; and Freya L. Sonenstein and Karen Pittman, "Sex Education in Public Schools: A Look at the Big U.S. Cities," paper presented at the annual meeting of the National Council on Family Relations, Washington, D.C., October 1982.

point in their lives were 40% more likely than others to know the time of the month when pregnancy is most likely to occur.[28]

Studies of attitude changes among high school students as a result of sex education are rare, but available evidence indicates that students who are exposed to such instruction do not develop more permissive attitudes toward sexual activity. A recent study of 100 eighth-graders found that sex education increased students' knowledge but did not reduce their guilt feelings.[29] Another study of 100 high school students showed that these teenagers did not become more permissive in their attitudes toward sexual behavior as a result of sex education. However, they did become more confident in their ability to make "correct" decisions about their own sexual behavior and more "liberal" in their thinking on family planning and abortion.[30] The evaluation of family-life education in 12 California school districts – and some earlier studies, as well – found that sex education could have a positive effect on students' self-esteem and decision-making skills, two qualities that appear to be strongly related to responsible behavior.[31]

One of the most important findings concerning the effects of sex education on behavior is that such instruction can lead to better communication between parents and children. In the evaluation of family-life education in California, about 70% of the parents reported that the program had improved their communication with their youngsters.

Public Policy

Although sex education generally is – and traditionally has been – an issue handled at the local level, 31 states and the District of Columbia have adopted laws or policies to guide school districts' efforts.[32] In the remaining states, the decision to provide sex education and the methods of doing so are determined entirely by the local school districts.[33]

Maryland, New Jersey, and the District of Columbia are the only jurisdictions that have mandated the inclusion of sex education in the curriculum. Eight other states – Delaware, Illinois, Iowa, Kansas, Minnesota, Montana, Pennsylvania, and Utah – encourage such instruction. No state prohibits it, although Louisiana bars sex education prior to grade 7.

Where they exist, the state laws and policies generally encourage local school districts to involve parents and community members in the planning of sex education programs. Eight states – Arizona (for elementary programs only), Idaho, Maryland, Michigan, Nevada, New Jersey, Washington, and Wisconsin – mandate such involvement. Moreover, most such laws and policies either require or recommend that local districts make provisions for pupils to be excused from instruction at the request of their parents. In addition, many states provide some guidance on program content. For example, seven states (Connecticut, Illinois, Maryland, Michigan, Minnesota, New Jersey, and North Dakota) and the District of Columbia support covering family planning in sex education programs; three states (Kansas, Ohio, and Utah) restrict it; and three states (Connecticut, Louisiana, and Michigan) restrict instruction that has to do with abortion. The District of Columbia alone requires that instruction on contraception and abortion be provided.

Small groups of parents have gone to court from time to time to challenge the constitutionality of sex education. Their most frequent argument is that such instruction constitutes the establishment of a religion, thus interfering with their rights under the First Amendment. Beginning with *Cornwell* v. *State Board of Education* in Maryland in 1969,[34] the courts have held that sex education is a public health measure that neither establishes any particular religious dogma nor denies religious freedom – as long as parents have the right to request that their children be excused. In *Smith* v. *Ricci* in 1982,[35] the U.S. Supreme Court dismissed an appeal by a group of parents who had challenged the mandate by the New Jersey State Board of Education that family-life education be provided in the public schools. This decision allowed the mandatory program to stand in New Jersey (where parents can exclude their children from such instruction). The courts have also made it clear that educational programs that cover birth control information are "neutral" in terms of religion, as long as they give equal time to all methods of contraception.[36] Finally, when parents have argued that their right to teach their children about sexual matters precludes school instruction, the courts have ruled that these parents cannot prevent other students from participating in sex education.[37]

Apart from the emerging constitutional framework we have just noted, there is no federal law on sex education. A policy statement issued in 1966 by the U.S. Office of Education (USOE) stresses the authority of *local* communities and educational institutions over sex education and proffers the support of the USOE (now the Department of Education) in initiating or improving programs. In practice, the department's role has been limited to providing technical assistance, on request, through a special projects section in the Office of the Assistant Secretary for Elementary and Secondary Education. However, legal authority exists for states and localities to fund sex education activities under Chapters 1 and 2 of the Education Consolidation and Improvement Act of 1981.[38]

In the Department of Health and Human Services (DHHS), the Office of Family Planning has spent approximately $3 million since 1970 to support a variety of projects, most of them related to curriculum development,[39] and the Bureau of Health Education in the Centers for Disease Control spent close to $2 million between 1978 and 1980 for several sex education research projects.[40] A relatively new federal program, the Adolescent Family Life Act of 1981, authorizes expenditures for family-life education programs that focus on "the problems associated with adolescent premarital sexual relations"; approximately $3 million was spent on such programs in 1982.[41] All the

Despite the perception of continuing controversy, it is clear that a broad base of support for sex education exists.

DHHS programs have involved extensive community input and have been designed to meet community needs and standards.

DESPITE THE perception of continuing controversy over sex education programs in the schools, it is clear that a broad base of support for such instruction exists. Sex education programs are also more widely available and broader in scope than has previously been assumed. Moreover, these programs are generally designed to reflect the needs and standards of the local communities, and the teachers who serve as instructors usually have considerable experience in teaching sex education and have relevant training in related fields.

It is also clear that young people can benefit from sex education. At best, programs that are carefully designed to provide information on the responsibilities of parenthood and on methods of birth control may help to reduce unwanted pregnancies. At the very least, sex education programs seem likely to increase youngsters' knowledge about the otherwise mysterious and confusing topic of human sexuality.

In locales where the schools do not yet offer sex education programs, individuals who are willing to propose that the schools consider doing so will find support among parents, students, and educators. Although a fear of controversy has probably deterred many supporters of sex education from proposing such programs, this fear appears to be exaggerated. With parental and community involvement, comprehensive sex education programs can be implemented successfully.

Where such programs *do* exist, however, it is probably unrealistic at this time to expect sharp declines in teenage pregnancy and sexual activity. Current sex education programs do not appear to have been designed to contend specifically with these problems. If the reduction of teenage pregnancy were made a major goal, better results might perhaps be achieved. Clearly, strong public support exists for including information on contraception in the sex education curriculum – presumably because the public perceives a relationship between such knowledge and a reduction in the number of unintended teenage pregnancies. Thus the topic of contraception should no longer be considered unduly controversial. Those communities that wish to see a reduction in teenage pregnancies may wish to reexamine their sex education programs in light of this information.

However, sex education in the schools will never be a panacea. Medical services have to go hand-in-hand with education. And, ultimately, the family will continue to play a far more pivotal role than any school or outside agency in setting an example and establishing values for young people and in providing them with the information they need in order to behave wisely.

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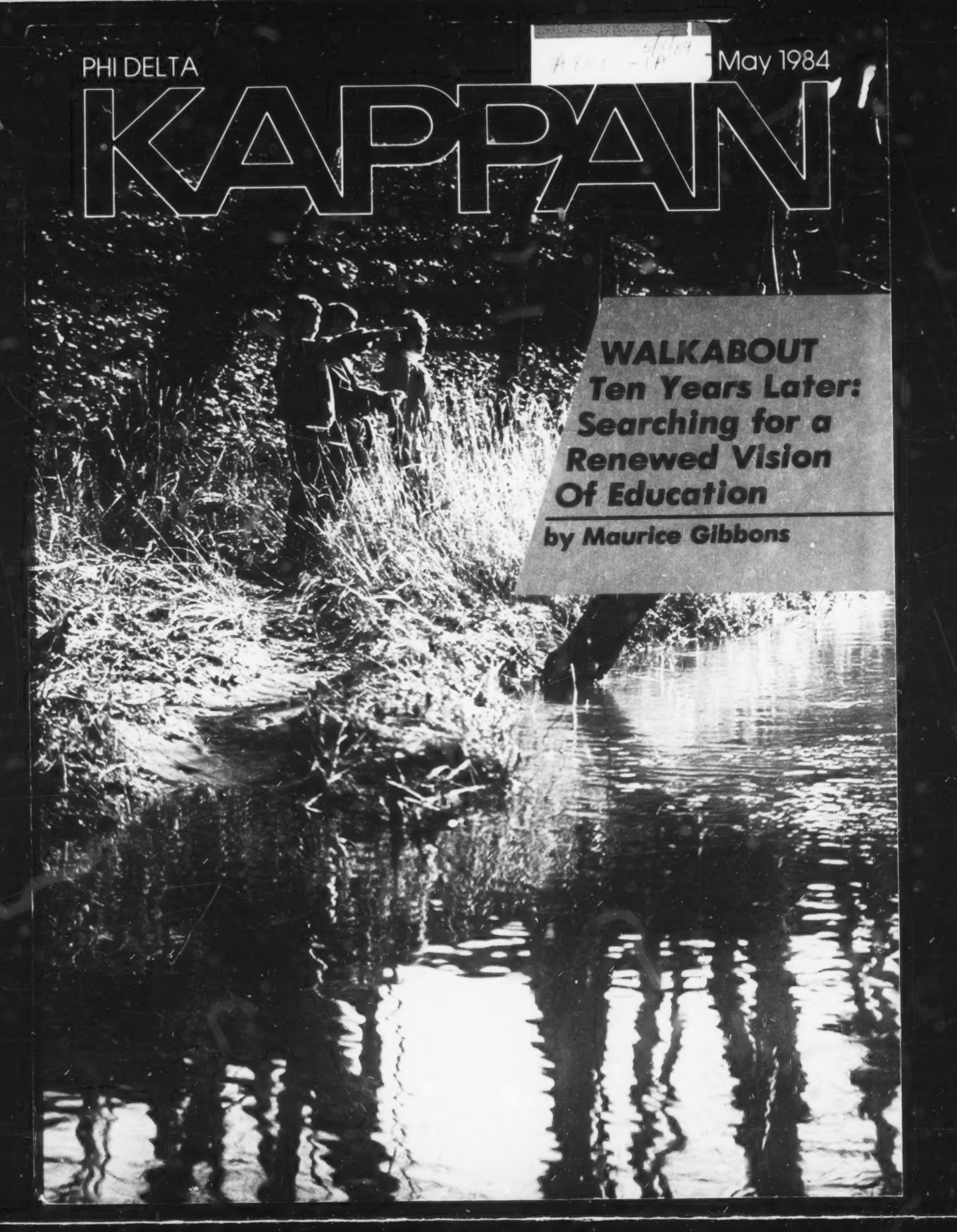

WALKABOUT Ten Years Later: Searching for a Renewed Vision Of Education

by Maurice Gibbons

May 1984 • Volume 65 • Number 9

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Cover Photo: Bill Strother

TESTING TEACHERS IN LOUISIANA: A CLOSER LOOK

by Donald Kauchak

One by-product of competency testing for teacher certification has been a nationwide decrease in the number of blacks who enter teaching, says the author, who examines this phenomenon in one southern state.

IN THE LAST decade there has been a definite trend toward the increased use of competency tests in the certification of teachers. By 1982, 15 states required some type of competency test prior to certification,[1] and by 1985 half the states in the U.S. will do so.[2] Of the 15 states that were already using tests for certification in 1982, eight used the National Teacher Examinations (NTE).

One undesirable by-product of competency testing for teacher certification has been a nationwide decrease in the number of blacks who enter teaching.[3] I wish to explore in this article how this is happening in Louisiana.

In 1977 the Louisiana legislature passed a law that stipulated that all new applicants for teacher certification must pass a competency exam.[4] The legislature did not specify the test to be used or the cutoff score to be reached; both of these decisions were left to the state superintendent of public instruction. The superintendent selected the NTE and convened a panel of teacher educators to recommend

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Figure 1. Percentage of Louisiana Teachers Who Are Black (By Years of Experience)

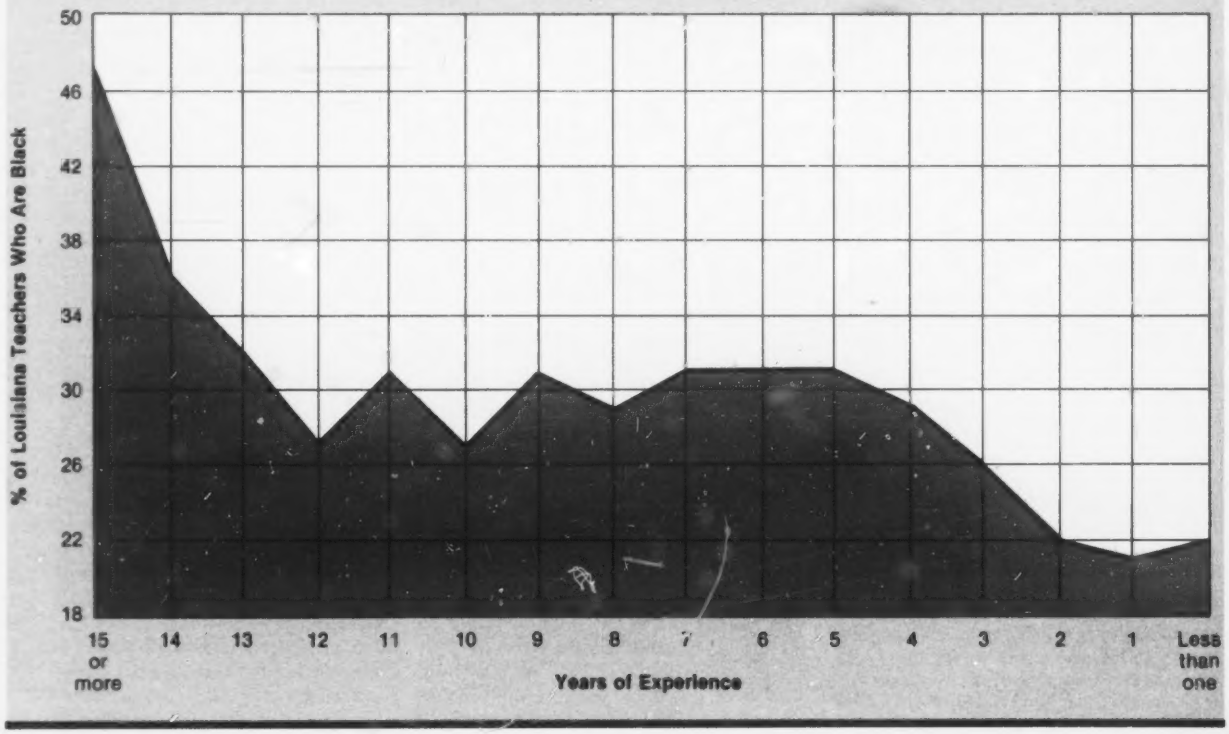

Illustration by Charmaine Dapena

minimum scores for certification in various subject areas.

As it has been used in Louisiana, the NTE consists of a common exam, which measures general professional knowledge and such general educational skills as knowledge of English and mathematics, and area exams, which measure understanding of the content and methods applicable in separate subject areas.[5] A panel of teacher educators determined cutoff scores for certification by examining individual items on these tests and considering 1) whether teacher education candidates at their institutions would have had an opportunity to learn the knowledge required to answer a given question correctly and 2) how important and difficult each item was. The cutoff scores were composite scores, so a strong showing on the common exam could offset a poor showing in a content area, or vice versa. The recommended cutoff scores ranged from about the 25th percentile in one area to the 60th percentile in another; the average was between the 40th and 45th percentiles.[6]

In 1978, when the test was first administered for purposes of certification, 502 of 950 graduates taking the test met the cutoff score, for a passing rate of 53%. In August 1982, 176 of 231 graduates taking the test met the cutoff score, for a passing rate of 76%.[7]

Superficially, these figures suggest that the new certification process has resulted in improved teacher education programs, as reflected in the higher percentage of 1982 graduates who passed the test. And it is tempting to conclude that education in Louisiana must also have improved. However, a closer look at the data from five years of testing in Louisiana raises some questions about such facile conclusions.

A Study in Black and White

In 1980 blacks made up 29.4% of Louisiana's population.[8] Figures from the state department of education show that 37% of the schoolchildren and 34% of the teachers in the state are black.[9] This latter figure remained fairly stable between 1973 and 1982. But the use of the NTE in the certification process is changing that picture.

Figure 1 shows the percentage of Louisiana teachers with specified amounts of experience who are black.[10] Two points should be noted. First, the sharp drop in the percentage of black teachers who have fewer than four years of experience roughly corresponds to the beginning of competency testing for certification in the state. Second, 47% of teachers with 15 or more years of teaching experience are black. We can only speculate as to why the percentage of black teachers with so many years of experience is so high. Probably the best explanation is that in segregated times in Louisiana teaching was one of the few respected professions open to blacks. Whatever the reasons for the declining percentage of blacks entering the profession, as current teachers grow older and retire, the racial composition of the teaching force will change.

I should note at this point that the percentages displayed in Figure 1 are probably slightly inflated because they include teachers teaching on emergency certificates. Emergency certificates are issued to candidates scoring within 10 percentage points of the criterion score in their area. These certificates are valid for one year and must be renewed yearly. But transition to regular status depends on retaking and passing the NTE.

The most recent decline in the percentage of blacks entering the teaching force in Louisiana can be explained by examining data on the performance of blacks on the NTE. Since the beginning of competency testing in Louisiana in 1978, only 15% of the 1,394 black students from public institutions who took the NTE achieved a passing score. This figure represents a 10% passing rate for blacks at predominantly black public institutions and a 28% passing rate for blacks at predominantly white public institutions in the state.[11]

Thus a partial explanation for the declining percentage of black teachers in Louisiana is that blacks are experiencing difficulty in passing the NTE. But by itself the passing rate of blacks does not fully account for the drop in the percentage of black teachers entering the teaching force in the state. There has also been a decline in the number of black graduates of public institutions who took the test. Table 1 shows a steady decline over the years in both the absolute and relative numbers of blacks who took the NTE.[12] Thirty-one percent of all Louisiana students who took the NTE in 1978 were black; only 13% of all Louisiana students who took the test in 1982 were black. The absolute numbers show a similar drop.

Since the inception of competency testing in Louisiana, only 211 black graduates of public institutions in the state have passed the NTE.

Since the inception of competency testing in Louisiana, only 211 black graduates of public institutions in the state have passed the NTE — just over 40 black students per year. This figure is well below the 580 black teachers that should have been hired each year if the racial composition of the teaching force was to be maintained at pre-1978 levels.[13]

What effect has all of this had on blacks entering teacher education programs? Teacher education enrollments at the two largest predominantly black institutions in the state have declined dramatically. The number of junior education majors at these institutions declined from 400 in 1979-80 to 273 in 1981-82 — a 32% drop. The number of senior education majors at these two institutions fell from 768 in 1979-80 to 389 in 1981-82 — a decline of 49%.[14]

Do these enrollment figures mean that prospective black teachers are leaving these predominantly black institutions for institutions where the passing rate is higher? Obtaining accurate data on student transfers from one institution to another is not easy, but two isolated bits of information suggest that large numbers of black students are not migrating to other institutions. First, the number of black graduates of predominantly white institutions who took the NTE has not increased. Instead, it has declined consistently over the last five years, with only 39 blacks from predominantly white in-

Table 1. Race of NTE Test Takers in Louisiana, 1978-82

Year	Number of Black Graduates Taking NTE	Percent of Total Test Takers	Number of White Graduates Taking NTE	Percent of Total Test Takers
1978*	284	31	634	69
1979**	444	22	1,562	78
1980**	361	21	1,358	79
1981**	210	17	1,050	83
1982†	95	13	616	87

*One test administration.
**Three test administrations.
†Two test administrations recorded for 1982.

Recently, only 23% of teacher education graduates from the two largest predominantly black institutions in Louisiana attempted the NTE.

stitutions sitting for the first two administrations of the test in 1982, down from 79 in 1979, 55 in 1980, and 53 in 1981.[15] Second, figures from the Baton Rouge campus of Louisiana State University, the campus that produces the largest number of candidates for certification, reveal no demonstrable increase in the number of blacks seeking admission to teacher education programs over the last three years.[16]

Some Questions

The present trend is clear: fewer blacks are becoming teachers in Louisiana. Its three immediate causes – the low passing rate for blacks on the NTE, the decline in the percentage of black graduates of teacher education programs who attempt the NTE, and the decline in the numbers of blacks entering education programs – are also clear. What is unclear are the reasons that underlie these immediate causes.

Why do blacks have trouble passing the NTE? Is the kind of training they receive at predominantly black institutions in the state a factor? Possibly. A consortium of nine predominantly black colleges in the Southeast believes that a partial answer to this question lies in the mismatch between the training at their institutions and the kinds of questions asked on the NTE. The schools involved are attempting to match their curricula to the content of the NTE through the infusion of more analytical approaches to problem solving in their teacher education programs.[17]

But research on the NTE suggests that improved teacher education programs might be only a partial solution to the problem. In a study conducted in North Carolina, researchers found a .88 correlation between scores on the NTE common examination and Scholastic Aptitude Test scores. This high correlation suggests that part of the problem blacks are having with the NTE may lie in weak academic preparation *prior* to entering college.[18]

What is happening to the black students who no longer enter teacher education programs? And what of the large percentage of black graduates who complete teacher education programs and never attempt the NTE? For the last three administrations of the test, only 23% of teacher education graduates from the two largest predominantly black institutions in Louisiana attempted the NTE. What happened to the other 77% who spent four years training to be teachers?[19] Are they less competent or just less confident than those who attempted the test? Are they now employed in states that don't require a competency test, or have they left teaching altogether for more lucrative or more accessible occupations?

These are just a few of the nagging questions raised by the first few years of experience with a practice that was designed to bring excellence to Louisiana education. Unfortunately, few concerted efforts to answer these questions have been made. Dialogue in Louisiana appears to have polarized around two points of view: one questions the validity of the NTE; the other questions the ability of black students to pass standardized tests or of black institutions to prepare their students to pass these tests. While this unproductive dialogue continues, a valuable human resource is wasted, and the likelihood that black students will encounter black role models in their classrooms declines.

"It's great how Mr. Watson's able to communicate with kids on their own level!"

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2. Art Harris, "Competency Tests Taking a Toll on Black Teachers," *Baton Rouge Sunday Advocate*, 8 May 1983, p. 9-C.
3. "Wider Use of Tests Blamed for Decline in Number of Black Schoolteachers," *Chronicle of Higher Education*, 2 March 1983, p. 7.
4. Louisiana Revised Statutes, 17:7 (b) (i).
5. The new NTE core exam, introduced in November 1982, consists of a test of professional knowledge, a test of general knowledge, and a test of communication skills that includes subtests of listening, reading, and writing. This new NTE is now being validated in Louisiana.
6. "National Teacher Examination Composite Score Requirements for Initial Teacher Certification in Louisiana," Louisiana Department of Education, Baton Rouge, 1982.
7. "Results of National Teacher Examinations," in *Louisiana's Education*, Vols. II-VI (Baton Rouge: Louisiana Department of Education, 1978-82).
8. U.S. Bureau of the Census, "General Population Characteristics, Part 20, Louisiana," *1980 Census of the Population* (Washington, D.C.: Superintendent of Documents, 1982).
9. *133rd Annual Report, 1981-82* (Baton Rouge: Louisiana Department of Education, 1982).
10. "Number of Teachers by Years of Experience and School Level," *Annual Statistical Report of Education*, Part IIB, Section 1, 1981-1982, unpublished, Louisiana Department of Education, Baton Rouge.
11. "Performance of Louisiana Students on NTE by Race, December 1978-August 1982," unpublished, Board of Regents, Baton Rouge, 1983. (Comparable figures for private institutions in the state were not available, but these institutions typically provide only about 10% of the new teacher candidates in the state.)
12. Ibid.
13. This latter figure was calculated by multiplying the number of new teachers in the state with three years or less experience by .34.
14. "Student Headcount by Declared Major (Detailed)," Louisiana Board of Regents, Baton Rouge, 1979-80 – 1981-82.
15. "Performance of Louisiana Students. . . ."
16. "Transfers to College of Education" (unpublished), Louisiana State University, Baton Rouge, 1979-82.
17. "Black Colleges Seek to Boost Test Skills," *Education Week*, 6 April 1983, pp. 3, 17.
18. Q. Whitfield Ayres, "Student Achievement at Predominantly White and Predominantly Black Universities," *American Educational Research Journal*, Summer 1983, pp. 291-304.
19. These figures do not include graduates who waited a period of time before taking the NTE. □

A Title I Tale: High Reading/Math Gains At Low Cost in Kansas City, Kansas

by Ruth Weinstock

A program in Kansas has demonstrated a consistently effective way of teaching large numbers of children to read and compute without breaking the bank.

AS SCHOOLPEOPLE well know, Title I of the Elementary and Secondary Education Act of 1965 (now Chapter 1) provides federal funds to help meet the special educational needs of "disadvantaged" children in low-income areas. Kansas City, Kansas, is such an area.

A large number of Kansas City families fall below the median U.S. income, and many of these families receive welfare. The proportion of Kansas City children who qualify for Title I aid is substantial: 40% of the district's total enrollment of 24,000, or some 10,000 students. That proportion has remained fairly constant over the years, and the district spends between $2 million and $2.4 million annually for its Title I compensatory education activities.

To successfully provide large numbers of youngsters with the extra help that enables them to master the basic skills appropriate to their age and grade is in itself no small task. To do so without breaking the bank is an even more impressive accomplishment. On both counts, Kansas City merits the attention of hard-pressed school officials across the U.S. who are still searching for economical and effective ways to teach large numbers of children to read and compute. Consider the following.

High Gains/Low Cost

The U.S. Education Department reports that the average achievement gain for children in compensatory education programs nationwide is seven months of learning for nine months of instruction. But the Kansas City school district has set its own sights higher: officials there expect a learning gain of one month for each month of remedial instruction.

According to Stanford Achievement Tests that are administered annually in the district's elementary schools and at the end of each semester in the secondary schools, Kansas City students have consistently met that objective for almost a decade. More often than not, they have surpassed it. In some years they have surpassed it by far – with gains in mathematics tending to be slightly greater than those in reading.

"I know of no other program in the nation reporting such high gains, consistently, year after year," says Robert Kraner of the University of Texas at Houston, the author of several federally commissioned manuals on Title I. Kraner conducts annual evaluations of the Kansas City Title I program. The following are excerpts from some of his reports.

- *1977-78*: "The achievement gains are more than twice the grade-level gain reported nationally as typical for Title I populations." (Gains were, in fact, about 65% higher than would be expected in a district of this type and, in some of the secondary grades, as much as 300% higher.)
- *1978-79*: "The gains [of 1.6 months for each month of instruction for all students at all grade levels] are approximately twice the .7 grade-level gain for typical students in compensatory education programs across the nation . . . and further, they surpass the norm expectancy for average students in the same grade levels."
- *1980-81*: "Not only does the Title I program continue to demonstrate outstanding results, but the cost per pupil compares favorably with the state average. . . ."

Just how favorable is the price tag? In 1980-81, for example, the district's average cost per pupil in all Title I programs was $186; in 1979-80 it was $173. In both years, these figures were less than half the statewide average Title I cost per pupil of $385. (Table 1 provides information on gains and costs for Kansas City students in grades 3 through 6.*)

How Kansas City manages to achieve economies of this magnitude will soon become apparent. Suffice it to say here that thrift is a built-in feature of the Kansas City Title I program.

The Instructional Design

In large measure, the school district attributes its successful record to the particular instructional design it employs to remedy deficiencies in basic skills. The Title I program in Kansas City combines programmed curricula in reading and mathematics with a master plan for the delivery and management of instruction. A vital element of the delivery system is the learning centers – rooms with carrels and other special equipment and materials, supervised by specially trained teachers. Intensive individualized study takes place in the 47 learning centers located in Kansas City schools.

The programmed curricula in reading and mathematics provide individualized, self-paced, step-by-step instruction. Students respond actively and receive immediate feedback and reinforcement.

But the positive results of Title I programs in Kansas City cannot be attributed solely – or even chiefly – to programmed learning. Many other variables

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*Similar information for grades 7 through 12 is available, on request, from Orvin L. Plucker, Superintendent, Kansas City Public Schools, Library Bldg., 626 Minnesota Ave., Kansas City, KS 66101.

affect the learning outcomes from this kind of instruction. These variables include not only the substantive content of a curriculum and the skill with which this content is programmed, but also the total context in which the learning activities are conducted. In other words, certain characteristics cause some programmed materials to teach better than others.

In Kansas City, the elements that make up the total programmed-learning experience have been painstakingly developed and orchestrated. These elements include the management of the instructional process, the physical setting in which instruction takes place, the training of teachers, the interactions of teachers and students, the reward structure, the attitudes of school staffs, and so on. Let us take a closer look at these elements and at how they are combined in Kansas City to produce a noteworthy record of consistently high learning gains at low cost.

The Courses of Study

The reading or verbal skills curriculum, which spans grades K-12, contains 16 courses that deal with the full range of reading competence. The curriculum begins with the development of reading readiness and progresses to decoding skills, comprehension skills, writing, vocabulary, study skills, and the application of reading skills to everyday life, e.g., reading job applications, catalogues, labels, road maps.

Roughly 50% of the 16 courses are "core programs" that focus on fundamental skills. Whatever a student's starting point in the curriculum, he or she generally works through these programs in a predetermined sequence.

The other half of the courses are supplemental programs that provide additional practice in such skills as auditory comprehension, vocabulary, spelling, or grammar. One of these courses, "On Your Own," is a homework component designed to reinforce the skills that students have learned in school. Some of the programmed materials are bilingual (Spanish and English). A range of alternatives also exists at every grade level, from which a teacher can select materials to motivate a student or to address a specific learning problem.

A student can enter the reading curriculum at any age, at any level of proficiency, and at any point in the school year. The program allows each child to advance in accordance with his or her individual ability.

The mathematics curriculum, which covers skills from first grade through prealgebra, contains more than 900 lessons in a sequence that moves from fundamental operations through mathematical theory, geometry, introduction to algebra, the metric system, applied mathematics, and consumer mathematics. This curriculum uses elements of both "new" and traditional mathematics.

As with reading, students are placed in the mathematics program by their scores on diagnostic/prescriptive tests. Each student advances through the units at his or her own pace, completing only those lessons that focus on not-yet-mastered skills. Frequent checks by the teacher insure mastery of the instructional objectives.

Table 1. Achievement Gains and Costs for Elementary Reading And Mathematics Learning Centers over an 8.5-Month Period

	Reading		Mathematics	
		Grade 3*		
Year	Months Gained		Months Gained	Per-Pupil Cost
1980-81	4		7	$191
1979-80	5		10	$183
1978-79	9		14	Not Available
1977-78	9		14	$169
		Grade 4*		
1980-81	9		9	$191
1979-80	9		10	$183
1978-79	12		11	Not Available
1977-78	11		12	$169
		Grade 5*		
1980-81	11		12	$191
1979-80	10		12	$183
1978-79	10		11	Not Available
1977-78	10		11	$169
		Grade 6*		
1980-81	9		12	$191
1979-80	10		13	$183
1978-79	10		11	Not Available
1977-78	9		14	$169

*The numbers of students in the reading-skills centers varied from 656 in grade 5 in 1980-81 to 371 in grade 6 in 1979-80. The numbers of students in the mathematics centers varied from 476 in grade 5 in 1980-81 to 215 in grade 3 in 1980-81.

Students in the Title I program come to a learning center daily for intensive, private instruction.

Experts in learning theory and instructional design developed both of the curricula in use in Kansas City. The reading curriculum is the brainchild of B. F. Skinner, George Spache, and Stuart Margulies; the mathematics curriculum, of Louis Eigen. Both are published by the New Century Education Corporation. Under a contract with the Kansas City school district, New Century provides both the instructional materials and the constellation of equipment and management services to support their use.

The Learning Centers

At the heart of the entire instructional system are the learning centers. Students in the Title I program come to a learning center daily for 40 minutes of intensive, private instruction. This is supplemental to, not a substitute for, their regular classroom instruction in language arts or mathematics. Instead, youngsters are released from such classes as art, science, or music to work in a learning center. Each center contains:

- 28 individual carrels, each equipped with an audiotape playback unit, earphones, and a specially treated felt marker (students learn here through sound as much as sight);
- a vast inventory of curricular materials (audiotapes, booklets, diagnostic tests, and so on), all placed on open tables for easy access; and
- each student's daily progress record.

Each lab is staffed by a teacher and an aide. The atmosphere is brisk and nononsense; the routine is prescribed. Children go first to the carrels to check their folders for the day's lesson. They then proceed to the materials area to pick up tapes and texts and return to their carrels to begin work.

A typical lesson consists of instruction provided by audiocassette and printed text, along with a response sheet. The audio/print presentation enables a stu-

dent to assimilate new material in small steps. To make the student an active participant, the audiotape asks frequent questions and then stops automatically to allow the student to answer. The student responds by checking an answer on the response sheet, using the special felt marker. The marker activates invisible ink that immediately reveals whether the answer is correct or incorrect. This procedure also enables a teacher to quickly scan the sheet and score the student's answers.

When a student has completed a lesson, the teacher records the score in that student's "progress plotter" and assigns the next lesson. If the student has mastered the material, he or she receives a "competency point." If the student has not mastered the material, the teacher assigns further work on the same skill.

Teacher Training

If every step in the learning center is tightly controlled for students, it is no less so for teachers. Moreover, the teachers in these centers – who might be more accurately described as "managers" – probably have to work harder than their colleagues in regular classrooms.

The extensive record keeping is one reason for this. At the elementary level, for example, learning centers operate seven periods a day, five days a week. With 28 students per period, a teacher in a learning center is responsible for 196 students a day – which translates into 980 progress records per week. Moreover, this and other tasks must be performed with strict adherence to established procedures.

To learn the system, all teachers in learning centers and their principals attend a weeklong residential training institute. Among the areas that the training sessions cover is teacher/student interaction. The trainers emphasize friendly one-to-one contact with students and positive reinforcement to help the youngsters feel good about themselves. This kind of interaction is crucially important, in order to counteract the depersonalized features of the center environment and the programmed-learning process.

Incentives and Rewards

The "competency points" awarded for successful completion of lessons are one form of positive reinforcement. In return for doing their best, students also receive free-play periods, social recognition, and teacher praise.

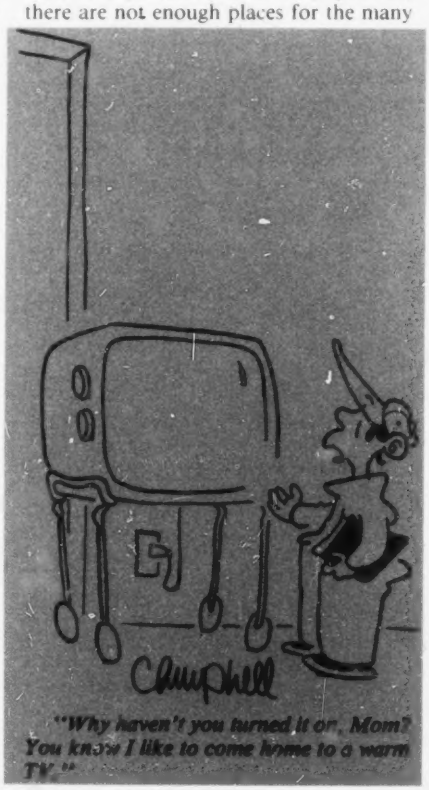
For example, when a student amasses a certain number of competency points, he or she is ceremoniously awarded a certificate of achievement. On this occasion, a school official takes a Polaroid photograph of the student accepting the award from the principal or a teacher, and the student receives the photo to keep. This strategy seems to be effective – even at the senior high school level where, despite their greater sophistication, students often dress up for the award ceremony and have their girlfriends or boyfriends join them for the picture.

A Cost Comparison

Kansas City's 47 learning centers are scattered throughout the district: 21 in elementary schools, 22 in junior high schools, and four in senior high schools. Sixteen of these are combination centers used for instruction in both reading and mathematics. These 16 centers are located in smaller elementary schools where enrollments do not justify the cost of two separate centers.

Most of the other centers focus only on reading, since reading disabilities are more widespread and usually harder to overcome than disabilities in mathematics. Data from the Kansas City school district also suggest that a correlation exists between the two types of disability: most students who have difficulty with reading also have trouble with math.

Even with 47 learning centers and the 1,316 study stations that they provide, there are not enough places for the many disadvantaged students in Kansas City who need assistance, however. Places in the centers are therefore assigned according to academic need, and students in certain grades are given priority. In the elementary schools, sixth-graders have priority, followed by fifth-graders, fourth-graders, and third-graders, in that order.



First- and second-graders do not attend learning centers at all. Instead, they receive remedial instruction in small tutorial groups of seven children per teacher. Clearly, this is a costly alternative. It is used because of four considerations: 1) the younger the child, the less effective the learning center; 2) primary teachers are well trained to teach basic skills and are better equipped than other teachers to provide remediation in a traditional setting; 3) in the lower grades the spread in disability is not so great – the gap grows wider as children grow older; and 4) it is probably unsound to use two different instructional approaches in the very early years, at least until basic reading skills are partially mastered.

The two contrasting modes of remediation in Kansas City – learning centers and small tutorial groups – provide a basis for cost comparison. From year to year, the small tutorial groups have cost an average of three times as much as learning centers for each pupil served. In 1980-81, for example, tutorial groups cost $393 per pupil. That same year, elementary learning centers cost $191 per pupil, and secondary learning centers cost $140 per pupil. The telling factor is obviously the difference in teaching load: a learning center can serve 196 students per day, whereas a teacher of tutorial groups can deal effectively with only 32 children per day.

Indeed, the capacity of the learning center was a major factor in the choice of the particular programmed-learning system now in use in Kansas City. "About 10 years ago," explains Walter Davies, the assistant superintendent for instruction, "we began looking for an effective way to handle large numbers of students who needed remediation. Mostly, we found programs with built-in limitations – programs that allowed only 10 to 12 student stations, say, or that could handle a maximum of only 50 students per day. We were looking for a system that could adjust its product and service configuration in different ways. We wanted 28 stations, because that is a reasonably manageable number for a single period and it still permits us to provide service for the majority of students who need extra help in this district. We chose our particular programmed-learning system because of its instructional approach, its materials, and the fact that it provided the flexibility to set up a configuration that would meet our requirements." □

Writing for Professional Publication: Ways to Increase Your Success

by Kenneth T. Henson

A survey of editors of education journals reveals many commonsense ways of increasing the odds that your work will get into print.

UNIVERSITY FACULTY members who don't publish may not literally perish. But those who fail to publish face lower pay increases and fewer promotions than their more productive colleagues, and they may even find themselves out of a job.

Little wonder, then, that many questions surround the mechanisms of getting published. Is it more difficult to publish now than it was 10 years ago? Who writes for each journal? Should you try to publish in a refereed journal? Of what use are query letters? How long should you wait for a response to a query letter? How long should you wait for a decision to accept or reject a manuscript? And how can you increase the chances of getting your manuscript published?

Seeking answers to such questions, in the fall of 1983 I sent a questionnaire to the editors of 50 education journals; 41 responded. I asked these editors the questions most often asked me by inexperienced writers. Table 1 shows their responses in detail, and the remainder of this article gives an overview of my findings.

The number of articles that are published fluctuates from year to year. The responses of the editors suggest that the total number of issues of education journals has declined but that the number of articles per issue has increased. Nonetheless, some four-fifths of all manuscripts submitted to education journals are rejected.

Although some education journals focus exclusively on research and others publish no research at all, most of the journals in my sample publish a mixture of research and nonresearch articles. Indeed, the editors I surveyed said that 46% of the manuscripts they publish report at least some research findings, and 90.5% of the journals that *regularly* publish research articles also publish some nonresearch articles.

The proportion of refereed journals in education is increasing. Ten years ago 68% of the education journals in my 1983 sample were refereed. Today, more than four-fifths (81%) are refereed. (See Table 1 for the status of individual journals.)

Who writes for education journals? Three-fourths of the contributors are university personnel; only about 15% are employed in elementary and secondary schools. Most of the latter write articles describing specific programs or methods. University professors, by contrast, tend more often to write theoretical articles that cause readers to reflect. But many professors have recently begun to write practical articles as well.

Experienced contributors to education journals know that timing is everything. They keep careful tabs on the journals that regularly publish theme issues, and they know which themes are coming up and when. A good article is much less likely to be accepted when a journal has just published a theme issue on the same topic. Indeed, for as long as several months after a theme issue has been published, some editors purposefully avoid accepting articles on that particular theme. Slightly more than one-third (36%) of the journals whose editors I surveyed plan theme issues. The actual numbers are shown in Table 1, but these figures vary for a given journal from volume to volume.

Writers often ask whether they should send query letters before they submit an article. Although this seems to be a simple question, experienced editors and authors disagree on the answer to it. Two-thirds of the editors in my survey said that they do not want query letters. Those who *do* prefer to receive query letters say that such queries serve the interests of contributors. For this reason, experienced authors recommend using such letters. For one thing, query letters can save time for an author. For example, if a certain topic is not suitable for a given journal or if the journal has just carried a similar article, the editor can say this when answering the query letter, thus keeping an author from wasting time on an unacceptable manuscript.

How long does it take to receive a response to a query letter? Some editors respond within a day or two; others take as long as three weeks. The range of time it takes editors to acknowledge the receipt of a manuscript is about the same. A good rule of thumb for contributors is to give an editor two to three weeks to respond to a query letter or to acknowledge receipt of a manuscript. Only then should the contributor inquire whether the editorial office received the letter or the manuscript.

How long does it take to find out whether or not a manuscript will be accepted? Again, there are no hard and fast rules. Once a manuscript has been acknowledged, an author may rest assured that it has arrived safely. But a decision about publication can take much longer.

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Most editors have many responsibilities in addition to manuscript selection; thus they are unlikely to be breathlessly awaiting the mail each day in order to dig into a fresh pile of manuscripts. For instance, many editorial positions require extensive travel; an editor may be out of town for several days without even knowing that a manuscript has arrived. Moreover, the process of evaluating manuscripts is a slow one, made even slower by an abundance of good manuscripts, which forces an editor to choose not merely between good and bad, but between good and very good. The delay occasioned by

Table 1. Characteristics of a Selected Sample of Education Journals

	Acceptance Rate (%)	Preferred Length (in Ms. Pages)	Min./Max. Pages	Refereed	Research Articles (%)	Articles per Year (Est.)	Issues per Year	Theme Issues per Year	Contributors Who Are University Personnel (%)	Prefer Query Letters	Days to Answer Queries (Avg.)	Days to Acknowledge Receipt of Ms. (Avg.)	Weeks Required for Decision	Effect of Photos on Acceptance
Action in Teacher Education	25	8	1-12	Yes	25	35	4	2	80	No	7	14	12	Possible
American Biology Teacher	30	12-15	*-20	Yes	10	*	8	3-4	60	Yes	5	7	15	Likely
American Journal of Education	13	*	*-20	Yes	90	11	4	1	100	No	14	14	12	None
Capstone Journal of Education	25	15	*-20	Yes	25	13	2	0	98	Yes	7	14	12-16	None
Child Development	*	15	2-50	Yes	96	*	6	1	95	No	2	1	6	None
Comparative Education Review	20	30	15-38	Yes	90	35	4	0	70	No	5	7	8	None
Computers and Education	25	20	**	Yes	100	*	4	1	100	No	**	1	12	Possible
Contemporary Education	5	10-12	1-25	Yes	10	48	4	3	75	No	2	7	2	None
Computing Teacher	30	**	½-3	Yes	10	135	9	2-3	30	Yes	10-21	7	6-12	Possible
Creative Child & Adult Quarterly	50	10	**	Yes	50	55+	4	Varies	50	No	7	21	4	Possible
Curriculum Inquiry	10	35	**	Yes	50	18	4	0	100	No	*	16	13	None
Curriculum Review	15	10-12	6-15	No	10	35	5	All	60	Yes	7-14	7	10-12	Possible
Delta Pi Epsilon	33.3	*	*	Yes	100	15	4	0	100	No	2	2	8-12	None
Early Child Development & Care	33.3	20	10-30	Yes	70	38	6	2	90	Yes	2	7	3	Possible
Early Years	2	*	*	No	0	200	9	9	*	No	*	14	2	None
Educational Forum	10	15-20	*-35	Yes	5	45	4	0	85	No	7	7	12-16	None
Educational Horizons	7.5	10-15	1-20	No	75	55	4	3	75	Yes	5	7	6	Possible
Educational Leadership	7.5	8-10	1-25	Yes	20	150	8	6-7	60	No	3	7	2-3	None
Educational Record	5.5	15-20	12-30	Yes	20	50	4	2	95	No	10	14	6	Possible
Educational Research	15	15	5-30	Yes	80	30	10	1	90	No	7-14	7-14	8-9	None
Educational Studies	*	*	*	Yes	0	7	4	0	90	Yes	5-7	7-14	*	None
Educational Technology Systems	60	20	10-30	Yes	50	30	4	1	50	Yes	10	7	10-15	Likely
High School Journal	10	8-10	2-20	Yes	60	40+	4	1-2	95	Yes	3	14	10	Possible
Instructional Innovator	33	10-12	5-30	Yes	10	80	8	8	45	No	7	21	26	Possible
International Journal of Early Childhood	*	8-12	6-12	*	*	12	2	0	50+	No	28	7	26	Likely
Journal for Research in Mathematics Education	20	20-30	*	Yes	90	25	5	1	80	No	5	7	12	None
Journal of Industrial Teacher Education	40	18-20	None	Yes	50	24	4	1	90	No	2	7	8	None
Journal of Reading	25	10-15	1-20	Yes	30	85	8	*	85	No	7	7	6	None
Journal of Reading Behavior	12.5	30	1-50	Yes	100	30	4	0	80	No	**	7	16	None
Journal of Research in Science Teaching	40	20	5-40	Yes	90	75	9	0-1	80	No	3	7	12	Likely
Journal of Teacher Education	13.1	12	6-15	Yes	35	144	6	Varies	85	No	*	7-8	5-8	None
NASSP Bulletin	18.2	8-12	7-15	No	15	180	9	9	55	Yes	3-5	2-3	4	None
Phi Delta Kappan	5	12	2-20	No	*	120	10	0	54	Yes	7	2	7	None
Reading Teacher	25	10-15	1-20	Yes	30	85	8	*	85	No	7	7	6	None
School and Community	25	5	1-15	No	25	88	6	4	27	No	5	14	2	Likely
School Science and Mathematics	10	16	*-16	Yes	20	52	8	0	50	No	2	*	3	Possible
Science Education	45	15-20	1-30	Yes	60	46	5	0	93	No	3	7	22	Possible
Social Studies	40	10	8-15	Yes	25	60	6	1	78	No	*	7	14	Possible
Teacher Educator	40	12	6-15	Yes	40	22	4	0	80	No	2	2	5-6	None
Vocational Education	5	6-8	4-10	No	**	80	8	8	50	Yes	60	60	12	Likely

* = don't know.
** = not answered.

the evaluation process will be even longer in the case of a refereed journal, which must mail copies of a manuscript to referees, wait for their responses, and then evaluate the manuscript in light of (sometimes divergent) responses.

In short, a contributor can expect to receive an acknowledgment of the safe arrival of his or her manuscript in an editorial office within two to three weeks. But a contributor should allow between three months and 4½ months for the decision on whether or not to publish the manuscript.

WHAT CAN A writer do to increase the chances that his or her article will be published? I asked the editors one final set of questions to shed some light on this issue and perhaps to give would-be contributors an advantage.

Almost half (47%) of the editors said that accompanying photos can improve a manuscript's chances of being accepted. However, only 13% of the editors said that photos are likely to have a significant effect. The best photos to send are black-and-white glossy prints; one-third of the editors prefer 8 x 10s, 30% prefer 5 x 7s, and 28% prefer 3 x 5s.

One way to increase the chances that your manuscript will be accepted is simply to avoid the common mistakes that writers make. Almost all the editors said that the most frequent mistake writers make is failing to acquaint themselves with the journal and its readers. Almost universally, these editors suggested that would-be contributors acquaint themselves with the topics, formats, length, and style of articles and with a journal's audience *before* they attempt to publish an article in that journal. Prospective authors should also read the suggestions to contributors that are published regularly by some journals and made available through the mail by others.

The editors also suggested that authors avoid jargon and write with their readers in mind. This piece of advice is not easy to follow, but it is perhaps the most important suggestion that those who wish to publish will ever be given. Specifically, the editors agreed that authors should use direct and conversational language and that they should spice their manuscripts with concrete examples wherever possible. The most deadly error a writer can make is trying to impress readers through the use of the inflated writing style and ornamental trappings of scholarship.

How can you avoid a labored, hard-to-read style? How can you make your writing easy to read? Rewrite, rewrite, rewrite. □

Editors Speak Out On Refereeing

by Bruce M. Smith and Pauline B. Gough

Two of the Kappan*'s editors wanted to know more about the methods of manuscript selection used by editors of education journals — so they asked the editors themselves. Some of the answers are rather surprising.*

THE RULES of academic publishing are unwritten but widely known. One of the foremost of these rules is that, for purposes of promotion and tenure, publications in refereed journals carry more weight than publications in nonrefereed journals.

Some evidence suggests that other factors (i.e., the size and scope of a journal's audience and its reputation for scholarliness) can work in favor of nonrefereed journals or against refereed ones.* But are the methods of manuscript selection used by refereed journals vastly different from those used by nonrefereed journals?

To answer this question and others, we surveyed the editors of a random sample of 395 journals catalogued in the *Current Index to Journals in Education* and, without follow-up, received 176 usable responses. From what these respondents, who edit 138 refereed and 38 nonrefereed journals, told us, the similarities between the two types of journals are more striking than the differences, particularly in the area of editorial control of content.

The circulations of the journals whose editors responded ranged from fewer than 500 readers to as many as 210,000. Most of the editors (168) claimed that their journals have a national or an international audience. As might be expected, those journals with the largest audiences tended to cover the broadest range of topics, while those with smaller audiences tended more often to cover specialized areas of interest. The circulations of the refereed journals ranged from 500 to 102,000, but these journals clearly clustered at the lower end of the circulation scale. Eighteen served 1,000 to 1,999

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*See Robert J. Suppa and Perry A. Zirkel, "The Importance of Refereed Publications: A National Survey," *Phi Delta Kappan*, June 1983, p. 739.